Student Medicine

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Student Medicine

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Official Journal of the
American College Health Association

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General Information

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Manuscripts of papers read at the Annual Meeting of the Association are to be filed with the presiding chairman following their presentation and will be published if acceptable to the Editorial Committee. Other manuscripts submitted for publication should be sent to Dr. Ralph W. Alexander, Gannett Medical Clinic, Ithaca, New York. Business correspondence and books for review may also be sent to the same address.

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Editorial Comment

HEALTH EDUCATION: THE PATIENT'S ROLE

A long-neglected aspect of health education is that which concerns the actions and attitudes of the patient in the doctor-patient relationship. In the development of this relationship often are found the determinants of satisfaction or dissatisfaction on the part of the patient and, at times, of success or failure in the treatment given by the physician. When dissatisfaction arises, or the treatment fails, the blame falls on the physician, and it is not remembered that the patient too, played an important part in the relationship which ended in failure.

That the importance of the role of the patient can be recognized by those outside of the medical profession is shown by a letter to the editor of *Life* which was written by an authority in the field of investments in response to the first part of a series entitled "You and Your Doctor." [1] He writes in part, "I hope somewhere something will be said about what the patients must do to deserve the doctor's personal attention. Only too often it is the modern patient's attitude that comes between him and the doctor." [2]

Co-operation and consideration are keys to securing the doctor's "personal attention" or to what we often speak of as the establishment of rapport. Co-operation is necessary at all stages of the doctor-patient relationship. If the patient fails to give complete details of medical history, he hinders the physician's efforts to make a diagnosis. Poor co-operation during physical examination or during the preparation for and the performance of laboratory tests may result either in the obtaining of erroneous information

[1] *Life*, *47:* 26–35, 144–160, Oct. 12, 1959.
[2] G. M. Loeb, *Life*, *47:* 12, Nov. 2, 1959.

or in failure to obtain any information. Finally, failure to follow the recommended treatment will prevent the consultation from producing the desired result.

Lack of consideration in the demands the patient makes of the physician greatly hinders the development of satisfactory rapport. The patient who makes unreasonable demands, as by stating or implying that it is an emergency situation when such is not the case, creates a barrier to the establishment of a sympathetic relationship which only rarely can the physician fully surmount. Invasion, for trivial or nonemergency conditions, of the often limited hours which the doctor has for his family, for recreation, or for sleep interferes with the development of a good doctor-patient relationship, since doctors are not different from other people and tend to react against what they feel is inconsiderate treatment from others. Every physician undoubtedly can recall many other situations in which a patient by word or by action has placed the doctor-patient relationship in jeopardy.

The attitude of the patient helps to determine not only the sort of care he receives from the physician but also the care he gets in the hospital or in any other therapeutic setting. One has only to witness the care (that which is necessary but little more) given by hospital personnel to a demanding unco-operative patient in contrast to that which may be lavished on a lovable child or a congenial older patient to realize how much the patient role may influence medical care.

In California there has occurred recently a development in doctor-patient relationships which can affect seriously the kind and quality of medical care that patients receive. There has been a high incidence of malpractice claims against physicians in California. As a consequence physicians are said to be turning patients away or sending them out of the state rather than attempting diagnostic and treatment procedures which involve some degree of risk. An unsatisfactory doctor-patient relationship frequently is the precipitating cause of malpractice actions against physicians. The present situation in California therefore is an example of poor doctor-patient relationships threatening to lower the quality of medical service in a whole state.

It will be a valuable contribution to health education if we can

help to develop and foster in students an understanding of the importance of the patient role.

In writing this we are not unmindful of the physician's role, which is equally important and often at fault. Much has been written about how the physician should conduct himself in his relationship with patients, and it is not our intention to try to improve on what has already been said. We only wish to point out that there exists an opportunity to help people to obtain the best possible care from the medical facilities available to them. The adoption of the proper patient role can go a long way toward accomplishing this.

WHITE HOUSE CONFERENCE ON CHILDREN AND YOUTH

A wealth of background material dealing with problems of children and youth soon will be available to the public through seven volumes being offered for sale by the 1960 White House Conference on Children and Youth.

The announcement was made December 15 by Ephraim R. Gomberg, Executive Director of the Conference, who said,

> The material should be invaluable for understanding the condition and needs of today's young people. It is the same data that will be used by 7,000 participants at the Conference in March. It has been prepared by specialists whose experience and training cover all the major fields of concern to be explored at the Conference.

The volumes can be ordered from White House Conference headquarters at 330 Independence Avenue, S.W., Washington, D.C. A special pre-Conference price of $10 for all seven volumes is good until March 1, 1960.

The Nation's Children is the title of three volumes authored by thirty-five specialists, edited by Dr. Eli Ginzberg, Chairman of the Conference Studies Committee, and published by Columbia University Press. *Children in a Changing World* is a book of seventy charts prepared by the Federal Interdepartmental Committee on Children and Youth interpreting governmental statistical data around children and their problems in today's world. These volumes will be off the press late in January.

A "national inventory" of unmet needs and currently pressing problems faced by the states will be the subject of a fifth volume. It is to be based on official reports from Governor-appointed committees in each state and territory and represents Conference preparation involving several million people. Major national organizations engaged in a national stocktaking for the Conference have provided evaluative reports, a digest of which will be published in a sixth volume.

Following the Conference, which will be held from March 27 to April 2 in Washington, a volume of *Conference Proceedings* will be published containing findings of the Conference and guides for citizen action at state and local levels to meet the needs of children and youth.

ANNUAL MEETING
AMERICAN COLLEGE HEALTH ASSOCIATION

April 27, 28, 29, 30, 1960

Royal York Hotel, Toronto, Canada

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Health Education in the College Program*

WILLIAM H. CRESWELL, JR., ED.D., AMERICAN ASSOCIATION FOR HEALTH, PHYSICAL EDUCATION AND RECREATION

IN discussing the role of health education in the college program, an analysis of the fundamental purposes of the total curriculum is essential. This curriculum reflects the underlying philosophy and purposes of the institution. It directs the entire student program of study and must be periodically re-examined to make sure it is consistent with the over-all objectives.

While diversity of thought and educational philosophy is the rule rather than the exception in American education, there are certain guiding principles which have been widely recognized and accepted as general purposes for higher education. A number of different lists of objectives exist, but there is enough agreement among them to make it possible to select a few representative ones and focus our discussion on them, specifically as they relate to health education. In 1947 the President's Commission on Higher Education set forth a list of objectives, three of which very clearly relate to health education. They are: (1) to attain a satisfactory emotional and social adjustment; (2) to maintain and improve individual health, and to co-operate in solving community health problems; and (3) to train for the responsibility of family life and citizenship.[1]

* Presented before the Section on Health Education, American College Health Association, Thirty-seventh Annual Meeting, Philadelphia, May 7, 1959.

[1] President's Commission on Higher Education, *Establishing the Goals* ("Higher Edu-

Another group of objectives was developed by a number of prominent educators in session at Washington University at St. Louis. These purposes for higher education were developed in the areas of knowledge, ability, appreciation, motivation, and interest. Health education would appear to contribute to the following items:

1. *Knowledge* of man's physical and biological nature and endowment.
2. *Ability* to think critically, to make value judgments, and to participate effectively in social situations.
3. *Appreciation* of beauty, of people, and of man's potentialities.
4. *Motivation* toward the development of an affirmative constructive orientation toward life, to further enhance the process of living and to assume social responsibility as a participant in the world community.
5. An *interest* in others, a concern for the whole of mankind, and a determination to seek self-realization at one's highest possible level.[2]

Even as brief a listing as this would tend to confirm the finding of the Educational Policies Commission that higher education in America has added to the traditional forms of the liberal arts another basic purpose—that of helping to provide solutions for society's problems.[3] This purpose is still controversial—many traditionalists decry it—but, recognized or unrecognized, it is fundamental to higher education today. The role of the college health education curriculum is perhaps best understood when it is related to this basic purpose of helping to provide a solution for social needs as well as of meeting student interest. A fundamental premise of health education is the interrelationship between learning and living; education in addition to developing the individual in a strictly academic sense must also address itself to the practical matter of aiding in the day-to-day progress of society.

The present examination of the general objectives for higher education is done with two purposes in mind: first, to show the

cation for American Democracy," vol. 1; Washington, D.C.: Govt. Print. Off., 1947), pp. 53–54.

[2] Huston Smith, *The Purposes of Higher Education* (New York: Harper, 1954), p. 154.

[3] Educational Policies Commission, *Higher Education in a Decade of Decision* (Washington, D.C.: National Education Association, 1957), pp. 8–9.

contribution of health education to a general college education, and, secondly, to show that health education had its beginning as higher education extended its purposes to include the social problem function.

The early development of college health education reveals its relationship to social problems and its practical purposes. Over one hundred years ago, President Sterns of Amherst College became concerned about the number of college students withdrawing from school because of health problems. He pointed out the importance of preventing ill health through education. Even prior to this, Harvard offered a series of hygiene lectures for its freshmen entitled, "What Every Young Man Should Know." Recent surveys on health education show that many colleges include a basic health education, or freshman hygiene, course as a part of the general education program. Some of these courses evolved for the express purpose of helping to meet a local problem.

Since the turn of the century, health education has developed as a field of study and an area of public service. Such developments as the establishment of the Children's Bureau, the American Child Health Association, and the Joint Committee on Health Problems in Education of the NEA and AMA, together with several White House Conferences, have all given impetus to the development of health education as a field of preparation in teacher education institutions. The comparatively recent School-Community Health Project made possible through the support of the W. K. Kellogg Foundation as well as various professional groups such as the American Association for Health, Physical Education and Recreation and the American School Health Association have contributed greatly to the teacher education movement.

However, while the field of health education is maturing as an area of study, the concept of health is not well understood. For too long, health educators have conducted their programs as though the mere presentation of factual information would lead to improved attitudes and healthful behavior in the student. Closer appraisal reveals that the knowledge of a fact does not always guarantee the incorporation of that information into applied behavior. In fact, many illustrations point up this seemingly paradoxical situation, that an increase of health knowledge seems to

beget an even greater gap between what is known and what is practiced. Perhaps the best-known current example is that of the Salk vaccine. People contributed millions each year to the National Foundation for Infantile Paralysis to find an immunization against polio. Now, some four years after the Salk vaccine was made available, public apathy threatened a possible epidemic this summer. On February 25, 1959, the National Health Council had to warn that, unless some 98 million Americans who were then *completely unvaccinated* received their Salk shots, there would be danger of a serious polio epidemic in the summer of 1959. For example, health officials of Arlington County, Virginia, estimated that there were some 42,000 persons under forty years of age who were not vaccinated. This is noteworthy, because people of this county are above average in education and socioeconomic status.

Another illustration of the gap between knowledge and behavior is to be found in the attitude toward the possible relationship between smoking and lung cancer. The data which strongly implicate cigarette smoking as a causative agent in lung cancer are widely publicized and generally known by the public. Lung cancer deaths are increasing at an amazing rate. For example, in the United States the toll has risen from some 2,500 deaths in 1930 to an estimated 35,000 deaths in 1958. An official of the American Cancer Society says, "It is significant to note that the sharp increase in lung cancer is almost exactly proportionate to the increase in cigarette sales." [4] And following the social acceptance of smoking by women, the practice increased greatly in the last two decades. In this year's annual report by the American Cancer Society, the striking increase in lung cancer among women was documented.

The concluding paradox deals with the health status of the physician—further illustration of the point that even the comparatively great knowledge of the medical doctor does not offer assurance of a higher level of health status on all counts. As reported in the November 29, 1958, *Journal of the American Medical Association*, electrocardiograph tracings were made of approximately 3,000 physicians during their annual conventions in the years 1955, 1956, and 1957. This program has been offered as a service to doctors.

[4] E. P. Pendergrass, quoted by J. D. Ratcliff, in The Growing Threat of Lung Cancer, *Today's Health*, *37:* 32, March 1959.

Findings from this survey reveal a higher-than-average number of cardiac abnormalities. These results are consistent with previous investigations which report a higher mortality rate due to heart disease among physicians than that of comparable age groups in the general population.

While recognizing that the nervous strain incurred by physicians may relate to heart disease, the author attributes the lack of hygienic practices with respect to proper diet and adequate daily exercise and the failure to take restful vacations as contributory factors. The writer points out that by extending the working day of the doctor by one year, the total effect would be 200,000 work years, or the equivalent of adding approximately 7,000 highly trained and experienced doctors to the medical task force.[5]

Another problem which must be understood by health educators if they are to develop effective health education programs is the fact that the concept of a positive program of preventive health has not yet become a part of the public's thinking. On the contrary, we are oriented to corrective measures, to the treatment of health problems. One frequently observes that individuals are motivated to action only after the signs of disease appear. Physicians have acknowledged the fact that the practice of medicine is predicated upon therapy and only recently has it begun to focus on constructive medicine. The noted cardiologist, Paul Dudley White, has said, "We can take a leaf from some of the habits of our ancestors who knew more about health than about disease. We know a lot about disease but we don't seem to pay much attention to health—not enough emphasis on prevention." [6]

The problem of air pollution illustrates the public's relative indifference toward the need for general health measures. With the ever-increasing industrial developments, there is a corresponding increase of toxic and irritating elements that are being cast into the atmosphere. Control measures appear to be considered only when an impending disaster threatens such as in the cases of Donora, Pennsylvania, or London, England. In another area, research on nuclear devices and explosives pushes rapidly ahead

[5] C. E. McArthur, The Physician Himself, *J.A.M.A.*, *168:* 1740–1744, 1958.
[6] P. D. White, Exercise—What It's Doing for Ike and What It Can Do For You, *U.S. News and World Report*, August 23, 1957, pp. 50–59.

without many of the answers which might enable man to protect himself. For example, what are the causative factors contributing to the alarming increase in leukemia at all ages? What is the maximum amount of exposure to strontium 90 which man can safely withstand?

Lest this analysis of our current status appear overly critical or pessimistic, let me assure you that I appreciate the great medical advances of our times and the valiant efforts made by the medical profession to solve present-day health problems. This discussion attempts to focus on circumstances which illustrate problems faced by the health educator and attempts to re-establish the role of education in preventing illness and in maintaining positive health.

Having discussed the general objective of the college curriculum, the historical development of the health education field, and the paradoxical attitudes besetting it, it seems appropriate to detail the positive role of health education in the college. In a sentence, it is the application of health knowledge to dynamic everyday living. Health Education is not a duplication of the teachings in biology, anatomy, and physiology. The essential difference is that these sciences present a rather well-defined body of knowledge, while, in contrast, health education is not a prescribed discipline. It draws its substance for teaching from the sciences and other areas as they relate to living healthfully and to the solution of health problems. While knowledge is important, it is so only if attitudes and behaviors are affected. As I have attempted to develop in the aforementioned illustrations, knowledge of facts does not alone guarantee healthful attitudes and behavior. Studying the facts of the respiratory system (an area of physiology) is not enough to assure the prevention of tuberculosis. A special effort must be made by the health educator to design opportunities for the learner to apply his health knowledge.

In addition to providing opportunities for college students to develop greater understanding of their adult role in protecting and promoting the health of the nation, the college can provide an opportunity to study the complications of teaching with attitudinal and behavioral change in mind.

Colleges can provide the leadership and facilities for research upon which a sound basis for curriculum development may be

established. Health educators in the college or university have many opportunities for sharing in the thinking of other scholars and in the findings of research which have implications for this field. The Center for Advanced Study in the Behavioral Sciences at Stanford University is an excellent example of how health education can benefit from research being carried on in a college or university setting. Ralph W. Tyler, Director of the Center, has identified certain findings which are of importance to health education. These are: (1) the importance of values in directing behavior, (2) the importance of motivation in learning, (3) the importance of social groups in the development of children and youth, and (4) the importance of providing essential conditions for learning in an imaginative way.

College health education must play an important role in the development of an informed citizenry to exercise through democratic procedures its responsibility for initiating, supporting, and carrying out appropriate health measures to meet the demands created by the rapidly changing world of today. Health education helps to bridge the gap between what is known to the medical scientist on the frontier of health knowledge and what is known to the layman.

How does the total college health education curriculum implement this objective? Before touching upon any details of the curriculum, it is important to recognize a necessary condition to the success of this program. An effective college health education program depends upon co-operative planning and the continued participation in the health education program of school health service personnel. Some of the advantages to be gained are as follows:

1. An open line of communication between the medical and educational personnel.
2. An effective means of interpreting programs to the student body and faculty.
3. A source of information for the educator of significant student health problems to be considered in curriculum development.
4. A resource to the health educator on technical health information.
5. An opportunity for greater co-ordination in school-wide activities (blood-donor projects, mass x-ray of students, etc.).

6. An opportunity to utilize health service personnel in the explanation and demonstration of various health service procedures.

7. Assistance with the evaluation of health education materials.

In developing a complete health education program, there are three major functions to consider. First is the general education program for all students. Since health is a universal phenomenon, all students can benefit from a sound program of instruction designed to meet their needs in terms of personal, family, and community health. A second aspect is the health education for classroom teachers. All teachers regardless of their teaching field must be prepared to accept the moral obligation to protect and to promote the health of their students. Testimony relating to the historic court case in Texas which established the legality of the school health program illustrates this point very forcefully. "Modern science has conclusively established the fact that there is an intimate relation between the mind and body and no teacher can intelligently deal with the child's mind who ignores such child's physical conditions. . . . It would not only be an injustice to the child to conduct the teaching process without information as to its physical condition, but such a system would be a waste of public funds." [7] And the third element relates to the professional preparation of those going into the field of health education. It is increasingly recognized that basic to the preparation of the health educator is a broad general education, which includes a thorough grounding in the biological and social sciences. Knowledge and technical competence in the health areas are, of course, basic ingredients. Opportunities to do supervised student teaching in health education, to understand and work with various organized health groups in the community, and finally to conduct an individual research project would seem to provide the formal preparation one needs to accept a position of leadership in this field.

In conclusion, the purposes of higher education have been examined to establish a frame of reference within which the role of health education in the college program might be better understood. It is recognized that health education is an outgrowth of the expanding purposes of higher education, which now include the social problem function. This but another example of the

[7] R. R. Hamilton, *Bi-Weekly School Law Letter, 2:* Nov. 13, 1952.

American concern for the individual. In the crash programs aimed at conquering space, the conservation and nurture of human resources must not be neglected. It is here that health education can make its contribution.

In the teaching of health, there is danger of becoming too academic. Factual knowledge alone has not been effective in achieving the major aim of living a healthful life. And finally, a complete college health education curriculum includes general education for all students, preparation of all teachers to carry out their responsibility to their students, and courses designed to prepare those who will be the health teachers of the future.

Duodenal Ulcer in College Undergraduates*

B. JAY HILL, M.D., AND C. J. TUPPER, M.D.,
UNIVERSITY OF MICHIGAN

DUODENAL ulcer is a very common disease. It has been recognized for many decades, and the literature is voluminous. The classic criteria of age, sex, symptoms, signs, and therapy are well known to all of us. In more recent years peptic ulcer in the pediatric age group has received considerable attention, but little has been reported on peptic ulcer in the college age group. The number of cases of peptic ulcer in this age group would likely be unimpressive to the average practicing physician, for, including all his diagnoses, they would likely account for a small percentage of his practice. In our particular instance we are more or less limited to this age group. The total numbers are large, and any condition we may wish to study is not overshadowed by the diseases inherent to other ages. Thus we are in a very favorable position to evaluate this selective age span and perhaps to contribute to medical knowledge regarding it. "Young and healthy" are frequently but not necessarily synonymous.

A filming fluoroscope was added to the X-ray Department of the University of Michigan Health Service in the fall of 1956. Students had previously been referred to the University Hospital for gastrointestinal fluoroscopy. Their total number was small in comparison to the large number of cases in that department. When

* Presented before the Section on Medical Service, American College Health Association, Thirty-seventh Annual Meeting, Philadelphia, May 7, 1959.

these students were all examined by one radiologist, and the number of examinations increased because of the ready availability of the service, it became apparent that duodenal ulcer was not an unusual finding. The records of the first eighteen months were reviewed. During this time 186 students had upper gastrointestinal tract examinations. Active peptic ulcer was demonstrated in 41 patients.

The "index of clinical suspicion" was interesting. During this same eighteen months there were at least 57,000 patient visits to the general clinic of the University of Michigan Health Service. Of the 186 upper gastrointestinal tract examinations requested, 83 had the specific clinical question of peptic ulcer, 65 had no provisional diagnosis, and 38 had nonulcer clinical impressions. In those patients with ulcer demonstrated radiographically, 29 had specific mention of possible ulcer in the clinical information provided to the radiologist (Table 1).

Table 1. Clinical impression in cases with positive x-ray diagnosis

Peptic ulcer	29
Stomach distress	1
Cardiospasm	1
Gastritis	1
Hiatus hernia	1
None stated	8

Of the 41 peptic ulcers demonstrated, 40 were duodenal—39 in males and only one in a female. The single gastric ulcer was in a female. In the student population males predominate, about two and one-half to one.

The age distribution was between seventeen and forty-four years. The average age was twenty-five, and the median age between twenty-three and twenty-four (Table 2).

The histories were exceedingly variable. The duration of symptoms was from six days to well over five years. The intensity of the subjective symptoms varied from mild indigestion to the excruciating pain of incomplete perforation. The physical findings varied from none to precise localization of pain and rebound tenderness.

Table 2. Age distribution of students with active peptic ulcers

Age	No. of cases
17–19	2
20–22	9
23–25	13
26–28	8
29–31	3
32–34	3
35–44	2

All of the cases labeled as active peptic ulcers had roentgen demonstration of the ulcer crater. Duodenal bulb deformity alone was not considered an index of activity. We were impressed at the frequency of duodenal ulcer craters with no associated bulb deformity. Of the 40 duodenal ulcers, 13 were in a deformed bulb, 3 had very minimal bulb deformity, such as might be ascribed to spasm, and 24 were in undeformed bulbs. This incidence of ulceration without deformity is much greater than anticipated from studies of the general population.[1] We attempted to evaluate various factors that might contribute to this unexpected finding. There was no correlation of age of the patient with bulb deformity. There was a partial correlation with previous history. All of the 13 patients with bulb deformity had a previous history. Of the 24 with no bulb deformity, 10 had a previous history and 14 had no previous history of indigestion or abdominal distress. Of these 14, the acute history was of less than three weeks duration in ten, less than ten days in two, and only six days in one patient. The acute symptomatology in those patients with bulb deformity was of only slightly longer duration (thirty-two days) than in those without deformity (twenty-five). In the entire group, those with a past history of indigestion had a longer acute history before consulting a physician.

The roentgen demonstration of these ulcer craters was accomplished primarily by spot films exposed under fluoroscopic control. The routine use of multiple exposures with compression of the

[1] R. Golden, *Diagnostic Roentgenology* (Baltimore: Williams and Wilkins, 1948), vol. 1; F. E. Templeton, *X-ray Examination of the Stomach* (Chicago: University of Chicago Press, 1944).

distended duodenal bulb was found most informative. No fleck of barium was labeled as an ulcer crater unless it was demonstrated on more than one exposure. Fluoroscopy was not reliable in excluding a crater. Only about one-half of the ulcer craters were positively identified at fluoroscopy. The lack of duodenal bulb deformity was impressive. Air contrast films of the duodenal bulb, utilizing swallowed air and appropriate positioning of the patient, were found very useful in some instances. In general these are less accurate and less under the direct control of the radiologist. It may be the only way to demonstrate the crater in a duodenal bulb when compression is not used. Routine films without fluoroscopic control, following barium ingestion and fluoroscopy, failed to demonstrate the ulcer crater in many instances. Fluoroscopy and follow-up films alone would have missed the diagnosis in an impressive number of these patients.

These patients were managed by many different physicians. The methods of management varied greatly, with the bland diet being the greatest common denominator. The individual physicians responsible for the patient's care utilized whatever form of therapy was most to their liking. Regardless of the difference in management, the great majority of the patients responded rapidly to the treatment and became symptom-free in a very brief time.

Hemorrhage was a complication in two patients, one with a previous history of ulcer symptoms and a deformed duodenal bulb, and one with no previous history and no bulb deformity. Perforation was a complication in one patient with a definite previous history of several years duration. In the few patients for whom follow-up films are available, it has been possible to demonstrate completely normal gastrointestinal films where there was no deformity of the duodenal bulb at initial examination and where treatment was prompt and effective.

In reviewing the histories of these students, one is struck by the fact that duodenal ulcer with active crater formation may easily masquerade as mild indigestion which is treated symptomatically with good response to treatment. The only flaw in this situation is that a physician loses the opportunity to start the ulcer-bearing individual at an early age on a program of prophylaxis for prevention of recurrence. One cannot help wondering how many times

duodenal ulcer is missed because of failure to obtain roentgen examination and because of very prompt response to treatment in the early stages of the ulcer. It would appear that the diagnosis is often made only after repeated bouts of mild indigestion which have become progressively severe so that further study is undertaken. We must also bear in mind the possible consequences of using a response to medical treatment to support the clinical diagnosis. The ulcer may well heal rapidly and the subsequent upper gastrointestinal tract examination be completely normal.

Duodenal ulcer in the adult and pediatric age groups is a familiar occurrence. We wish to emphasize that the young person of college age is likewise a candidate for this disease. We are of the opinion that early diagnosis and proper subsequent education of the patient can serve to minimize the number and severity of recurrences and can likely reduce the development of complications of duodenal ulcer.

Primary Atypical Pneumonia*

ROBERT A. SNYDER, M.D.,
NORTHWESTERN UNIVERSITY

FOR the past thirty years, certain pneumonias occurring both sporadically and in small epidemics and failing to conform to the accepted picture of either lobar or bronchial pneumonia have been recognized and called atypical pneumonias. Pathologically, acute bronchitis or acute interstitial pneumonitis would be more accurate.

Etiologically, a few of the atypical pneumonias can be clearly established as due to psittacosis, influenza, Q fever, and recently to the RI-67 group of viruses, but a larger group remains with still unproven etiology. This group is widely called primary atypical pneumonia. Since, like other viral respiratory infections, it is frequently seen epidemically in a school population, as the students first convene, it is of importance for the student health physician.

At the bedside, primary atypical pneumonia may be suspected in a rapidly developing pneumonitis without prodromal illness, in which there is no consolidation and no blood-streaked sputum. The temperature may rise to 103 degrees, but there is relatively little toxicity, and the physical findings are usually out of proportion to the x-ray picture. The latter usually reveals a hilar, sunburst configuration. The blood count is almost always normal, both total white count and differential, and the sputum is free of bacterial pathogens. Characteristically it is possible to demonstrate the presence of cold agglutinins in 80 per cent of the cases, and agglutinins for the nonhemolytic streptococcus MG in 50 per cent.

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* Presented as part of a Panel on Respiratory Viral Diseases before the Section on Medical Service, American College Health Association, Thirty-seventh Annual Meeting, Philadelphia, May 8, 1959.

Primary atypical pneumonia must be differentiated from pneumococcal pneumonia, streptococcus and staphylococcus pneumonias, Friedlander's pneumonia, psittacosis, and Q fever, by knowledge of the characteristic clinical picture of each of these and by bacteriological and virological studies.

Mention should be made of some very interesting current work being carried out by Chien Liu, one of Eaton's associates. Liu has discovered a fluorescent complex prepared from an antibody which appears in the serum of persons with primary atypical pneumonia and also has found that this antibody will react with the filterable agent (called the "Mac" virus) that Eaton holds is responsible for primary atypical pneumonia.

Also, Harding, a virologist at Northwestern University, has postulated a subclinical type of this disease on the basis of a high percentage of cold agglutinins found in well family contacts of patients with primary atypical pneumonia.

The complications of this type of pneumonia are rare. Occasionally pericarditis, myocarditis, or encephalitis are seen. Acute hemolytic reactions are also reported. Recovery usually occurs in seven to fourteen days, with or without antibiotic treatment. The latter has been recently justified on the basis that streptococcus MG may be responsible or that the illness may be due to psittacosis, a large virus apparently susceptible to penicillin.

Treatment of Infectious Mononucleosis*

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THE treatment I now use for infectious mononucleosis is not new or original, but it is the best treatment I have found for this disease. It is not a cure and is symptomatic treatment only, but the results have been exceedingly gratifying. Every case I have used it on has been able to continue in school. Practically every case not receiving this treatment dropped out of school because of the illness.

The original research upon which this treatment is based was done at the University of Illinois under the leadership of Dr. Charles Drenckhahn, an internist associated with the Carl Hospital, Urbana, Illinois, and Dr. L. M. Dyke, the Director of Student Health at the University of Illinois. Drs. Kinzie, McLane, and myself collaborated with Dr. Drenckhahn on the original work, which, to my knowledge, has not been published.

In this study we assigned numbers from 1 to 5 in rotation to all cases of infectious mononucleosis. A positive heterophil test was the criteria for a diagnosis and necessary before treatment was begun. Each patient was given a physical examination noting especially the condition of the throat, extent of the lymphadenitis, as well as the complaints of the patient. Complete blood count, urinalysis, cephalin flocculation, and thymol turbidity tests were done on all patients. Each patient then received 1,200,000 units of long-acting penicillin by intramuscular injection. From here on the treatment

* Presented as part of a Panel on Respiratory Viral Diseases before the Section on Medical Service, American College Health Association, Thirty-seventh Annual Meeting, Philadelphia, May 8, 1959.

varied according to the number assigned to the patient. All cases assigned to Group 1 received 1 cc. of ACTH every twelve hours for three days. Those assigned to Group 2 received 1 cc. of placebo every twelve hours for three days. All in Group 3 were given twelve cortisone tablets, 25 mg. each, with instructions to take one tablet four times a day, and those in Group 4 were given twelve placebo tablets to take one tablet four times a day. Each placebo could not be distinguished from its drug counterpart by inspection, and the only person who knew which was which was Dr. Drenckhahn, supervisor of the project. The patients were treated on an ambulatory basis when possible, and each physician followed his own cases, usually seeing them once in every one-to-three-day period depending upon the treatment and severity of the case. All hospitalized cases were treated and followed by Dr. Drenckhahn, who used the same rotating type of treatments.

Every two weeks each patient was re-evaluated as to complaints, condition of throat, palpable glands, liver and spleen, and the results recorded on the patient's chart. A complete blood count, urinalysis, and liver function tests were repeated at this time. This routine of re-evaluation and retesting was continued until the patient no longer had any symptoms, or the liver function tests were normal, or the patient failed to return, whichever occurred first.

The results we obtained showed definitely that the patients receiving cortisone or ACTH recovered sooner than the others. This was also borne out by a quicker return to normal of the liver function tests. Subjective symptoms such as fever, loss of appetite and strength, and swelling and tenderness of cervical lymph glands subsided more quickly in the cortisone and ACTH treated cases.

With these results in mind, I began treating all cases with a presumptive diagnosis of infectious mononucleosis at the University of Arizona as follows. Patients with sore throat, lymphadenitis, and general malaise who had a lymphocytosis with an increased number of atypical lymphocytes and who had a heterophil of 1:28 or over were started on the following regime: penicillin V, 400,000 units, t.i.d. by mouth, and cortisone 100 to 150 mg. daily in divided doses until the patient feels about normal. Then the cortisone is reduced to the smallest daily dose that controls symptoms. This is usually around 50 mg. daily beginning about the third to

fifth day of treatment. The patients are seen every other day, and the dosage of cortisone adjusted according to the symptoms. The only other treatment is increased hours of rest, high-protein diet, and the elimination of strenuous exercise.

All cases are treated on an ambulatory basis as far as is practical. A few days of hospitalization for high fever and for confirming the diagnosis are sometimes necessary. Most students attend classes regularly, and none who has received this treatment has had to drop out of school. In two and one-half semesters, I have treated a total of twenty-three cases of mononucleosis in this manner.

The largest amount of cortisone used in any one patient was 900 mg. The smallest amount was 225 mg. The average amount per case was 525 mg.

In patients sensitive to penicillin, Achromycin was used.

No patient gained any weight during treatment, but a few lost weight. This was probably due to decrease in appetite. No urinary abnormalities were noted and no liver or spleen enlargement found. In fact no untoward effects of any kind were noted.

I believe this to be a safe and excellent method of treatment for mononucleosis, a treatment that keeps most of the patients ambulatory, able to attend classes and feeling relatively normal, and a treatment superior to any other in use today.

Some Observations on Personality Development in College Women*

MERVIN B. FREEDMAN, PH.D., VASSAR COLLEGE

IN the last decade psychiatric services, largely in the form of some sort of psychotherapy or counseling, have become increasingly prominent on college and university campuses. Even the most dedicated of humanists on college faculties, who may consider social scientists to be manipulators of "guinea pigs" and psychiatrists to be individuals who adjust nonconformity and creativity out of their patients, are likely to regard a psychiatric section in the student health service as performing legitimate and useful services under certain circumstances. When students are obviously disturbed emotionally, so confused, depressed, or anxiety-ridden that they cannot pursue academic activities with any effectiveness, the great majority of members of college faculties and administrations are likely to be happy to refer them to a psychiatrist in the health service for appropriate aid. It is recognized that such cases call for some sort of professional activity beyond the competence of most educators.

But is this the limit to which psychiatric and psychological

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knowledge should be utilized on our campuses? Is the knowledge of personality development possessed by psychiatrists and psychologists of use to educators in some more direct way? Or should psychologists and psychiatrists consider that they can best serve the cause of education by treating individuals—students or perhaps faculty members—by helping to "lift" depressions, resolve conflicts, and generally aid in removing barriers to effective study and teaching?

This is a complex issue. We know that many educators look with jaundiced eyes upon pronouncements by psychologists and psychiatrists on the subject of the relationships between psychological knowledge and the process of education. They have heard representatives of the psychological sciences talk about maturity, well-being, health, and the like; and even though this talk may interest them, they are likely to respond by saying that all this may be very well, but what has it to do with education. What have maturity, health, and so forth to do with the process of developing the intellect, training the mind, or inculcating knowledge of our cultural heritage? Teachers, after all, are not psychotherapists, and, accordingly, of what use to them are the concepts of psychology, psychiatry, or psychoanalysis?

This position was summed up very well by Joseph Wheelwright [1] in some remarks at last year's convention of the American College Health Association. Dr. Wheelwright suggested that mental health personnel should be wary about telling experienced educators and administrators how to run their show. In his view the indoctrination of educators is not a primary function of psychiatry. Dr. Wheelwright also contributed somewhat to our humility in these matters by pointing out that psychiatrists often have considerable difficulty, when they are called upon to define what they mean by such things as health and maturity. It is easier to say what these things are not rather than to say what they are.

Despite such words of caution, however, psychiatrists who work with college populations are not likely to be easily persuaded that they do not have something worth while to tell educators. Perhaps this point of view was very well stated in some remarks by Dana

[1] Panel on Role and Scope of Academic Faculty Advisers in a Mental Health Program, *Student Medicine, 7:* 67, 1958.

Farnsworth [2] at last year's convention. Dr. Farnsworth suggested that psychiatrists "can contribute to better teaching by enlarging faculty understanding of the teaching process along psychological and developmental lines." This is a forthright statement of a position. The psychiatrist can contribute to better teaching, not solely or primarily by means of clinical activities but by enlarging the scope of the educator, by providing him with knowledge about students which can be of value in the teaching process.

Yet, even though our sentiments are those of Dr. Farnsworth, we must admit to the experience observed by Dr. Wheelwright; that is, when called upon to present teachers with useful developmental or psychological knowledge of students, we are likely to have rather a difficult time. What is the cause of this difficulty? Is it a matter of lack of knowledge on our part of the essentials of personality or character change in college students? To some extent, yes, for as we know, only too well perhaps, development at ages seventeen to twenty-two has been much neglected by psychological theorists and research workers.

Despite the inadequacies of our knowledge of development in college students, however, I am of the opinion that the difficulties in rapprochement between psychology and education have more to do with uncertainties and confusion in the field of education than with the shortcomings of psychology. What is sorely needed is a discipline, a science, a profession of higher education. We need theories about how and why students change in college and researches that examine theories and hypotheses and put them to the test. We need formulations as to what kinds of institutions or teaching methods produce what sorts of changes in what kinds of students. These are the prime needs in higher education at this time. Without such systematic efforts to establish a science of higher education, I doubt that college education can be appreciably improved in the United States. I do not think that such measures as honors programs for exceptional students, a federal scholarship program, or higher salaries for faculties will do very much to improve the general quality of education, much as they may aid some individuals.

[2] Panel on Role and Scope of Academic Faculty Advisers in a Mental Health Program, *op. cit.*, p. 68.

In short, what is needed is a full-fledged science of higher education, a body of knowledge and a technology to be utilized in achieving certain ends. And, of course, psychology has much to contribute to such an endeavor. Not that a science of higher education would be limited in the main to the contributions of the psychological sciences. Knowledge of how students change in the college years and how institutions of higher education operate must, of necessity, be drawn from many fields—psychology, psychiatry, psychoanalysis, education proper, sociology, anthropology, social work, and philosophy, for example.

In evolving such a body of knowledge, a logical place to start is with what is already known about personality change and general development in college students. And here we must confess that there is very little systematic knowledge. To be sure, quite a bit is known about the prediction of academic success on the basis of certain quantitative variables, such as background factors or scores on personality inventories. But studies of this kind tend to be circumscribed both in depth and complexity. Systematic knowledge of how students' personalities or characters do or do not change as they pass through college is indeed lacking. One has but to read a book like that of Philip Jacob's *Changing Values in College*,[3] an account of the research now available in the literature, to realize how little has been done. The majority of studies reported by Jacob describe measures of but one test or variable for fairly small samples of students.

A survey of the literature makes it clear that development at ages seventeen to twenty-two has received almost no attention. It is common practice for psychoanalysts who write of adolescence—Anna Freud [4] is a good example—to state that adolescence is the stepchild of psychoanalysis. The reference here is usually to early adolescence, that is, the years eleven or twelve to about sixteen. This being the case, the period of late adolescence must qualify as a kind of step stepchild.

One reason for the neglect of adolescent development has been

[3] New York: Harper, 1957.

[4] *The Ego and the Mechanisms of Defense* (New York: International Universities Press, 1946); "Adolescence," in *The Psychoanalytic Study of the Child* (New York: International Universities Press, 1958).

the overweening importance ascribed to infancy or to early influences on personality. Viewed in this way adolescence is merely a recapitulation or resurgence of certain basic infantile conflicts. One deals with the conflicts or challenges of adolescence—for example, the increased vigor of sexual drives attendant upon the physical maturing of sex organs—in ways pretty much already determined by dispositions laid down in early childhood.

In the early days of psychiatric attention to the problems of education, this emphasis of psychology upon the early determinants of behavior in the life history was one of the factors that divided psychiatrists and educators. In those more naïve days, it was all too easy to categorize college students psychiatrically. There were the neurotic students, neurotic because of the persistence of infantile mechanisms in the personality, and there were the normal students. The neurotic students needed psychotherapy as well as education, and the normal students were to be helped by education to develop in the ways in which their nonneurotic solutions of infantile crises directed. Such a point of view, of course, troubled educators who were sure that events of the college years were of great emotional and intellectual importance in their own right and should not be viewed as mere unfoldings of powerful inner trends.

Current thinking in these matters has brought psychology and education much closer together. Psychoanalysts, such as Anna Freud and Erik Erikson,[5] have emphasized the importance of the adolescent period in personality development. Thus, Leo Spiegel,[6] a psychoanalyst who is interested in the problems of adolescence, has recently stated that we can no longer be satisfied with the simple conception that in adolescence the Oedipus complex is revived. The Committee on the College Student of the Group for the Advancement of Psychiatry has been busy of late evolving concepts that pay attention to the complexity and importance of the events of the college years. Psychologists, such as Robert White,[7] have emphasized events of the college years in case history material

[5] E. H. Erikson, "Growth and Crises of the 'Healthy Personality,'" in Clyde Kluckhohn, H. A. Murray, and David Schneider, eds., *Personality in Nature, Society, and Culture* (2d ed., rev.; New York: Knopf, 1953), pp. 185–225.

[6] "Comments on the Psychoanalytic Psychology of Adolescence," in *The Psychoanalytic Study of the Child.*

[7] *Lives in Progress* (New York: Dryden, 1952).

and in more general formulations about personality development. All this activity has brought dynamic psychology closer to what might be described as cognitive psychology. Cognitive psychologists have resembled educators in that they have stressed all along the importance of the thinking function or the intellect in personality, and have emphasized the influence of the intellect upon the emotional life rather than vice versa.

The time would seem to be ripe, then, for concerted and massive research efforts to determine the kinds of changes that take place in students during the college years and to illuminate the influences that have brought about these changes. We cannot, of course, underestimate the difficulties and complexities inherent in such research. Measuring and evaluating how students change, relating these changes to the influences of faculty members, other students, or family, describing the processes by which such influences affect students is a very large order indeed. But the difficulties are not at all insurmountable.

I should liken the situation of attempting to evolve a discipline of higher education to that of creating the discipline of psychotherapy. Surely no one can argue at this time that we understand very much about how talking or communicating with a psychotherapist helps people. Just as we have no empirical evidence that liberal education does whatever it is supposed to for college students, we have no unequivocal empirical evidence that psychotherapy really helps people. Although there is much to be found out, we do have a body of knowledge, some generalizations that guide us in treating people in psychotherapy. There are some criteria we may follow in selecting suitable candidates for training as psychotherapists, and there is certain information that may be taught them. The enormous complexities of human personality and relationships have not prevented the psychological sciences from carving out a field containing some systematic knowledge. Surely the field of higher education can be mapped in the same way.

The foregoing is by way of introducing the work at Vassar College of the Mellon Foundation for the Advancement of Education. Since 1952 these research activities of the Mellon Foundation have consisted of studies of present students and alumnae by means of tests and interviews. Our test battery has consisted of the following

tests or instruments, in some cases not used in their entirety: the California Psychological Inventory,[8] the Minnesota Multiphasic Personality Inventory,[9] the California Public Opinion Survey,[10] the Maslow Test for Dominance-Feeling in Women,[11] the Barron Inventory of Personal Philosophy,[12] the Franck Drawing Completion Test,[13] the LaForge-Suczek Adjective Check List,[14] and various figure preference tests devised by Harold Webster [15] and Frank Barron and George Welsh.[16] We had four concepts in mind in choosing our tests originally—intellectual functioning and achievement, authoritarianism and its opposite, masculinity-femininity, and psychological health versus psychopathology.

I should like now to report some of the differences between freshmen and seniors at Vassar College which we have observed on our tests. In this connection may I say that I shall be leaning heavily upon the work of Harold Webster in the account of test results to follow. This is a convenient place also to express my indebtedness to Nevitt Sanford, co-ordinator of the Mellon Foundation from 1952 to 1958, for aid with many of the formulations which appear in this paper.[17]

Let me begin the report of senior-freshmen differences by describing the Developmental Status Scale.[18] This is a scale of 123

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[8] H. G. Gough, *California Psychological Inventory* (Palo Alto, Calif.: Consulting Psychologists Press, 1957).

[9] S. R. Hathaway and I. C. McKinley, *The Minnesota Multiphasic Personality Inventory* (rev. ed.; New York: Psychological Corp., 1943).

[10] T. W. Adorno, E. Frenkel-Brunswik, D. V. Levinson, and R. N. Sanford, *The Authoritarian Personality* (New York: Harper, 1950).

[11] A. H. Maslow, A Test for Dominance-Feeling (Self-Esteem) in College Women, *J. Social Psychology, 12:* 255–270, 1940.

[12] F. Barron, *Inventory of Personal Philosophy* (Berkeley, Calif.: University of California Press, 1952).

[13] K. Franck and E. Rosen, A Projective Test of Masculinity-Femininity, *J. Consulting Psychology, 13:* 247–256, 1949.

[14] R. LaForge and R. F. Suczek, The Interpersonal Dimension of Personality: III. An Interpersonal Check List, *J. Personality, 24:* 94–112, 1955.

[15] H. Webster, "VC Figure Preference Test and Manual," Vassar College, Mary Conover Mellon Foundation, 1957 (mimeo.).

[16] F. Barron and G. S. Welsh, Artistic Perception as a Factor in Personality Style: Its Measurement by a Figure-Preference Test, *J. Psychology, 33:* 199–203, 1952.

[17] In addition to Drs. Webster and Sanford and the author, since 1953 the Mellon Foundation research staff has utilized the services of Donald Brown, John Bushnell, and Richard Young.

[18] H. Webster, Changes in Attitudes during College, *J. Ed. Psychology, 49:* 109–118, 1958.

items which discriminates seniors from freshmen on the basis of item analysis. In a sense these items may be thought of as representing development at Vassar from freshman to senior year. Hence the name. A sample of some of the items follows, the scoring direction (T, true; F, false) being that of the seniors: I have often gone against my parents' wishes (T); I set a high standard for myself and feel that others should do the same (F); it is annoying to listen to a lecturer who cannot seem to make up his mind about what he really believes (F); I would be uncomfortable if I accidentally went to a formal party in street clothes (F); it is a pretty callous person who does not feel love and gratitude toward his parents (F); I believe in a life hereafter (F).

Perhaps these few responses will give some notion of what the scale is like. We have studied the general content of the items and have classified them under the following rubrics: freedom from compulsiveness, flexibility and tolerance for ambiguity, impunitive attitudes toward people in general, critical attitudes toward authority (including parents or family, the state, organized religion, rules, and the like), intraception (that is, the dominance of feelings, fantasies, speculations, aspirations—an imaginative, subjective human outlook), mature interests, unconventionality of nonconformity, rejection of traditional feminine roles, freedom from cynicism toward people, and realism. A factor method was applied by Harold Webster to the total scale which produced two smaller scales of thirty-one and seventy-two items. The general factor in either scale we termed "rebellious independence." This plus an attitude of tolerance toward human weakness express the central themes of the scale.

Another scale which discriminates seniors from freshmen is one we have called the Impulse Expression Scale.[19] A sample of the 124 items which comprise the scale follows (again the direction of scoring is that of the seniors): I enjoy discarding the old and accepting the new (T); I like dramatics (T); I often act on the spur of the moment without stopping to think (T); I like to flirt (T); I have never done anything dangerous for the thrill of it (F). A rational clustering of the items of the scale after the fashion of

[19] N. Sanford, H. Webster, and M. Freedman, Impulse Expression as a Variable of Personality, *Psychological Monographs, 71* (whole No. 440), 21 pp., 1957.

the need scheme developed by Henry Murray [20] and his associates yields the following needs as indicative of the traits possessed by high scorers, or seniors as compared to freshmen: dominance, recognition, aggression, autonomy, acquisition, sex, exhibition, change, and excitance. As one would expect from the nature of the items or traits measured by both scales, the Vassar Developmental Scale and the Impulse Expression Scale are significantly correlated, the coefficient of correlation being .57.

We find that seniors are significantly lower than freshmen on measures of authoritarianism. Authoritarianism is a personality syndrome which has yet to be defined with precision but which nevertheless is predictive of behavior in a variety of situations. Among many traits that have appeared to be expressive of authoritarianism are compulsiveness, rigidity, intolerance of ambiguity, punitive morality, submission to power, conventionality, cynicism, and anti-intraception. We have two measures of authoritarianism. One is the standard scale developed by Nevitt Sanford [21] and his colleagues at the University of California, known as the F Scale, which contains expressions of social attitudes and ideology. Examples of such statements are: "Science has its place, but there are many important things that can never possibly be understood by the human mind" and "What this country needs most, more than laws and political programs, is a few courageous, tireless, devoted leaders in whom the people can put their faith." On this scale seniors score much lower than freshmen.

In addition to the F Scale we have developed another measure of authoritarian tendencies which we have called the Social Maturity Scale.[22] The Social Maturity Scale correlates around –.75 with the F Scale. Unlike the items of the F Scale, those of the Social Maturity Scale tend not to have ideological content. Among the 149 items comprising the scale are the following (the responses are those of the senior class, the scoring direction being that of less authoritarian tendency): Once I have my mind made up I seldom

[20] H. A. Murray, *Explorations in Personality* (New York: Oxford University Press, 1938).

[21] T. W. Adorno, E. Frenkel-Brunswick, D. V. Levinson, and R. N. Sanford, *The Authoritarian Personality* (New York: Harper, 1950).

[22] H. Webster, N. Sanford, and M. Freedman, A New Instrument for Studying Authoritarianism in Personality, *J. Psychology, 40:* 73–84, 1955.

change it (F); our thinking would be a lot better off if we would just forget about words like "probably," "approximately," and "perhaps," (F); parents are much too easy on their children nowadays (F); most people make friends because friends are likely to be useful to them (F); a strong person doesn't show his emotions and feelings (F); a person does not need to worry about other people if only he looks after himself (F). The Social Maturity Scale correlates .64 with the Vassar Developmental Scale and .21 with the Impulse Expression Scale.

I should like to say something now on the subject of senior-freshman differences on the Minnesota Multiphasic Personality Inventory. This inventory was designed to measure the type and extent or degree of psychopathological tendencies. The inventory yields scores on nine clinical scales; for example, there are scales measuring tendencies toward hypochondriasis, depression, schizophrenia, and paranoia. There are also four validating scales, so called, which shed light on the extent to which the test results may be regarded as valid or invalid for one reason or another and which are useful adjunctive devices in interpreting scores on the clinical scales proper.

The trend is for seniors to be higher than freshmen on most of the clinical scales. Thus, they are higher on the following scales: hypochondriasis, depression, hysteria, psychopathic deviate, schizophrenia, and mania. I use the term "trend" advisedly, because the differences are just that. They tend to be small and to be of only marginal statistical significance in the case of comparisons between individual classes. The consistency of the trend over a period of years is such that the differences attain significance, however. In short, seniors may be regarded as subscribing somewhat more frequently than freshmen to statements indicating psychological or physical disturbance or instability.

Thus, we see that substantial personality change takes place between freshman and senior year at Vassar College. Seniors are higher than freshmen on the Developmental Status Scale and the Impulse Expression Scale and lower on measures of authoritarianism. They also display a slight tendency toward greater emotional instability. Seniors may then be thought of as less conventional than freshmen, more critical of authority, more aware of sexual

and aggressive needs, more attuned to their inner lives—to mention some of the traits measured by these tests.

Before going on to discuss the meaning or theoretical import of these test findings, I should like to address myself very briefly to two relevant matters. One is the question of the degree to which these results, based as they are on students at one college, may be regarded as generalizable to many if not most college women. And the second has to do with the timing of the senior-freshman changes. Do the changes between freshman and senior year take place at a fairly constant rate each year—are they linear for the four-year period—or are there periods or years of maximum acceleration, when change is greatest?

We have some information bearing on the representativeness of the changes we observe in Vassar students between senior and freshman year. Our tests have been given to students at a variety of women's colleges, a liberal arts college in the Near East, a Negro college in the South, a Catholic college in Canada, and an Eastern women's college somewhat different in curriculum and organization from Vassar. In all cases the same kinds of trends obtain as the ones we find at Vassar. As one would expect, in some cases the differences in means on the various scales are great, the students at other schools being much higher or lower. But whatever the original freshman mean scores, the tendencies are the same. The students at these other colleges change between freshman and senior years in the same directions as do Vassar students.

I should mention here that I am talking about findings on our Developmental Status Scale, the Impulse Expression Scale, and the Social Maturity Scale. We do not have Minnesota Multiphasic Personality Inventory scores for these other colleges. The Minnesota Multiphasic Personality Inventory profiles of Vassar students, however, are similar to those reported in the literature for college women generally.

Thus, one may hypothesize that these trends are characteristic of many women in this age range, or at least college women. One would hope that studies of this kind would be carried on with women who do not go on from high school to college. Such studies would help in evaluating the extent to which the changes we ob-

serve in college students are a function of their situation as college women and are not relatively universal for that age range.

As for the question of the timing of these observed changes, there is evidence that they come about fairly early in the college career, for the most part within the first two years. Scores obtained at the end of the sophomore year approach senior scores fairly closely. As I indicated earlier, however, this study is still in process and only tentative conclusions are justified. Should these preliminary test results hold up with further sampling, I should still be inclined not to think of this as an indication that little or no personality change takes place after sophomore year. Rather I should consider this to be more an indication of inadequacy or lack of sensitivity in our tests. I believe that much development goes on after the sophomore year, and I believe that study or analysis of our interview data will bear this out.

I should like to spend a few moments now considering the theoretical import of our test findings. They demonstrate rather clearly, I believe, what psychiatrists and psychologists working in student health services have probably known or suspected all along—that is, that there are systematic personality changes going on during the period of seventeen or eighteen to twenty years of age and later. Development in late adolescence is not simply a matter of progression along lines laid down in early adolescence or perhaps even in infancy. This is not to say, of course, that one may consider the developmental trends of late adolescence to be independent of early adolescence and infancy. Obviously, an individual or an individual personality is all of a piece, and what happens in late adolescence is very much a function of earlier occurrences. But what does seem clear is that late adolescence in women, at least in college women, is a period deserving of attention in its own right. It may be thought of as a developmental phase with certain regularities of problems or conflicts and certain systematic ways of meeting these. And it may well be that the developmental phase of late adolescence will prove to be as important for the adult personality as those of early adolescence and infancy.

Our findings are consonant with the studies of adolescent girls, in this case girls aged fourteen to sixteen, carried out by Elizabeth

Douvan [23] of the University of Michigan. I shall have more to say about Dr. Douvan's work in a moment in commenting on our interview studies, but I should like to quote the following sentence from her paper on character process in adolescence now. "I do think that in all likelihood feminine character develops later than masculine character, and that adolescence—the period we ordinarily consider *par excellence* the time for consolidation of character—is a more dramatic time for boys than for girls." Dr. Douvan is suggesting here the likelihood that in girls substantial personality or character change is likely to come after age sixteen. As will have been noted, she suggests also that character develops earlier in boys. One wonders then about the male equivalents of our findings. The Center for the Study of Higher Education of the University of California is now engaged in test and questionnaire studies of college men and women at a number of institutions. They are using measures quite similar to ours, and we may look forward soon to comparable results for men.

The changes we note in our test measures between freshman and senior year accord rather neatly with the standard psychoanalytic notions of the task or tasks of adolescence, or with the kinds of development in personality or character that are required by a new state of biological maturity and by considerable change in social and familial relationships. Thus, Leo Spiegel [24] says that adolescence begins around thirteen or fourteen in psychic dissolution and terminates in psychic consolidation in the years eighteen to twenty. I shall return to the term dissolution shortly, but what are the kinds of adjustments and eventual consolidations required?

We know that standard psychoanalytic theory has it that the biological changes of puberty are accompanied by a resurgence of instinctual forces. The sexual and aggressive drives of childhood, which have lain dormant, as it were, since infancy, are revived. The adolescent ego must find ways of dealing with these urges, adjustments which involve neither denial of their existence nor acting with abandon upon impulse. The test findings I have re-

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[23] E. Douvan, "Character Process in Adolescence," University of Michigan, 1957 (dittoed).

[24] L. A. Spiegel, "Comments on Psychoanalytic Psychology of Adolescence," in *The Psychoanalytic Study of the Child.*

ported reveal that seniors display a considerably enlarged scope of awareness of aggressive and sexual feelings. Such attitudes form a prominent part of the Developmental Status Scale and, of course, they comprise the major content of the Impulse Expression Scale.

In order for these aggressive and sexual urges to be assimilated into the adolescent ego or into awareness, some change or softening, so to speak, is very likely required in the superego—the primitive agency of control. The situation in adolescence or adulthood in which a rigid superego has been maintained without modification has been likened to a society in which rules control people rather than vice versa. This change away from rigid superego functioning has been called the humanization of conscience by Robert White.[25] The term humanization implies, of course, the recognition that rules are man-made and should not be considered apart from awareness of the human condition. The freshmen-senior differences we have found, particularly those in the area of authoritarianism, reflect changes of this kind.

Increased awareness or acceptance of sexual and aggressive impulses and liberalization in superego functioning should not be interpreted to mean, of course, that the equivalent of deep-level psychoanalytic psychotherapy takes place during the college years. These processes are surely not comparable to the regression and emotional re-experiencing that are so essential to psychoanalytic psychotherapy which has as its aim major revisions of the structure of the personality.

Rather I think that these changes should be regarded, primarily, as a function of growth in the ego, that process of the personality or the psyche which guides, controls, and directs and which mediates between the inner world of the individual and his outer environment. Perhaps in this sense brief psychotherapy and college experience are not dissimilar. In each situation one hopes for growth and improvement in ego functioning. The ego, like any power or function, grows stronger with exercise. Growth in the ego is an integral part of most psychotherapies. Mild frustration and the absence of intense anxiety are likely to lead to "coping" operations and eventually to an increment of improved functioning in the ego.

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[25] *Lives in Progress* (New York: Dryden, 1952).

A college situation which allows for experimentation and which requires of students that they resolve conflicts, solve problems, assimilate new experiences is surely likely to enhance the ego's functioning. In 1936, Anna Freud [26] suggested that we might hope to gain as much knowledge of the ego from a study of adolescence as we have of the id from a study of childhood. This is still a hope, unrealized by our desultory researches in the adolescent period, but I daresay that the potential for increased knowledge of the ego's functioning noted by Miss Freud still remains.

I should like to make some comment now about our interview studies, although only briefly. What I wish to emphasize is the placidity of the adolescent period in our subjects. The period of early adolescence prior to college was not one characterized in a majority of cases by turmoil or "psychic dissolution," to return to Dr. Spiegel's term. Only a small minority of students described themselves as having experienced the kinds of troubling events we commonly associate with adolescence—doubt and guilt about sexual matters, violent mood swings, rejection of parents and the family, and the like. Most students reported relative ease in adjusting to the biological changes of puberty, and few described noteworthy conflict with parents. In fact, the most common difficulties or anxieties of the early adolescent period which were reported had to do with matters of social relations, chiefly problems of acceptance by other girls.

It did not seem to us that this phenomenon of taking early adolescence in stride was the consequence of rather massive repression or denial of difficulty. Of course, in matters involving retrospective accounts of earlier events, it is difficult to tell what actually did happen. Suffice it to say that in most cases the interviewers did not consider that the qualities of strong repressive tendencies, reaction formations, and the like were present. It was our opinion that the relatively uneventful early adolescences reported by our subjects were a fairly accurate picture of their actual experiences.

This view accords with that of Elizabeth Douvan. You recall the sentence I quoted earlier in which she voiced the opinion that adolescence was a more dramatic time for boys than for girls.

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[26] *The Ego and the Mechanisms of Defense.*

Girls, she believes, "are more likely to show an unquestioned identification with and acceptance of parental regulation. They less often distinguish parents' standards from their own—and they do not view the parents' rules as external or inhibiting as often as boys do."

The senior-freshmen differences we have found on the Minnesota Multiphasic Personality Inventory indicate that perhaps personality development in the college years is accompanied by a measure of confusion and instability. The seniors do score higher than freshmen on most of the clinical scales of the inventory, and it may be that we are justified in concluding that some increase of neurotic symptomatology is the price seniors must pay for the enlargement of their scope and awareness. As I pointed out, however, the differences in scale scores between freshmen and seniors are small and do not justify a conclusion that substantial psychopathological tendency becomes prominent during the college years. The composite senior profile on the Minnesota Multiphasic Personality Inventory falls well within the statistical bounds of normality, as defined by the average tendency of the general population, and our interview data do not support the view that the college years for most students are a period of marked psychological strife and disorder.

The relative smoothness and ease of adjustment in the adolescent period, at least in girls, noted by Dr. Douvan and ourselves, has also been observed by Joseph Stone and Joseph Church of the Child Study Department of Vassar College.[27] They wonder about the possible consequences of such trends. They ask, "Do these adolescents move smoothly and without stress into a true maturity, with a strength of identity equivalent to that forged in the overassertiveness of 'adolescent rebellion,' or do they become docile, less differentiated, incomplete adults . . .?" This is a good question. According to Anna Freud [28] adolescence is by definition an interruption of peaceful growth. She is of the opinion that those adolescents who do not display some form of adolescent upset are the victims, as it were, of excessive defenses against drives. In her

[27] L. J. Stone and J. Church, *Childhood and Adolescence* (New York: Random House, 1957), p. 294.

[28] "Adolescence."

opinion, these adolescents, perhaps more than any others, are in need of help to remove inner restrictions so as to allow normal maturation. It would seem that much research will be needed before we understand enough of the relationships between complexity and maturity in the adult personality and discontinuity and conflict in development to answer the question raised by Drs. Stone and Church.

Before concluding I should like to say something of a study we are in the process of carrying out—a study involving comparisons on our test measures between students who voluntarily see the college psychiatrist and those who do not see the psychiatrist. Since our tests are administered to all entering freshmen, it is a relatively simple matter for us to carry out such comparisons.

The design of the study is as follows. For three different classes, those of 1959, 1958, and 1957, Robert Nixon, Mellon Foundation psychiatrist, furnished the research staff with the names of those students who had voluntarily sought psychiatric aid and who had had at least four therapeutic contacts. Four interviews were considered to be some sort of rule of thumb index of commitment to psychotherapy. The criterion of self-referral not only rules out students who may be seeing the psychiatrist somewhat under duress, as it were, but also some of those students with a sufficient degree of manifest psychopathology to come to the attention of members of the faculty or administration, thereby leading to a referral. The question then may be phrased somewhat as follows. What are the characteristics, as revealed by tests of entering freshmen, which differentiate those students who voluntarily seek psychiatric help at some later date and who remain for four or more interviews from those students who do not seek psychiatric help?

The results are quite remarkable, I believe. For all three classes, the psychotherapy sample differs on every scale from the remainder of the class. This is true for the Impulse Expression Scale, the Vassar Developmental Scale, and both measures of authoritarianism. The direction of the difference is such that the psychotherapy sample scores higher in the senior direction. Not all of the differences for each class on each scale are statistically significant, but there is not one instance of reversal of direction, and the results are highly significant over the three classes.

If we consider that the characteristics of seniors as compared to freshmen represent some form of increased maturity, we have evidence that those students who voluntarily seek psychotherapeutic aid and stick with it are more mature than their classmates at the time of college entrance. Of course, it may be argued that this is a superficial maturity, and it may well be that part of the difficulty leading up to a decision to seek psychotherapy has to do with inability to achieve some sort of integration of various drives and attitudes of which many freshmen are not yet even aware. We are now making a study of other characteristics of these psychiatric patients, for example, of their scores on the Minnesota Multiphasic Personality Inventory. Such results may show that these students display more symptoms of neurosis or general psychopathology. But even if this be the case, the results I have reported demonstrate that those students who seek psychological help, far from being somehow inadequate or retarded in some emotional or personality sense, tend to be ahead of their classmates in developmental trends of late adolescence.

One effect of the foregoing results is to focus attention on development in the immediate post-college years. Students who seek psychotherapy and seniors as compared to freshmen are characterized by less of the blandness that seems to be associated with late adolescence in college women. They are more aware of themselves and their surroundings, more flexible, more open to new experience. Is this a prelude to some form of integration of the personality at a higher level of complexity? Studies of experiences in the years after graduation can provide the context which is needed for greater understanding of the developmental trends described in this paper. Let us hope that we may soon look forward to a number of studies which relate personality characteristics in the college years to subsequent events.

The Role of the Internist in Athletic Medicine*

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I have experienced considerable difficulty in finding a suitable title for what I wish to say and the one I have used is not quite accurate. What I really wish to discuss is not the role of the internist, but rather how the physician who cares for athletes can use the knowledge and skills which are usually regarded as the special province of the internist to guide him in decisions which concern the welfare of his charges. I would prefer that the team physician have this knowledge and these skills in his own right, but lacking them in full he may seek the help of an internist and thus validate the title I have used.

The physician who provides medical care and guidance for athletes must be skilled in the treatment of traumatic conditions such as sprains, contusions, fractures, and other conditions which are infrequently seen in usual medical practice. Such skill cannot be acquired solely by didactic means but must be supplemented by observation and experience on the playing field and in the locker room. Much can be gained from tutelage by a physician already experienced in the care of athletes, but the full development of ability in this specialty is dependent on the physician's interest in and understanding of athletes and the sports in which they participate. I wish to stress the value of understanding both the athlete and his sport.

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* Presented before the Section on Athletic Medicine, American College Health Association, Thirty-seventh Annual Meeting, Philadelphia, May 7, 1959.

The physician who understands the patient, knows his temperament, his degree of motivation, and his pain threshold, can better evaluate the extent of the original injury and can more readily decide when it is safe to permit resumption of physical activity. Knowledge of the demands of the sport in which the patient participates is of paramount importance.

Although we usually think of the sports physician as a specialist in the field of minor surgery who treats the end results of trauma, there are frequent instances when nonsurgical conditions must be dealt with. Therefore, he must either have training in internal medicine or secure help from a consultant. The first is preferable because, as I have already noted, the understanding of the patient gained by daily contact and observation throughout the sports season is of great help in evaluating the presenting disability, whether it is surgical or medical in nature. The consultant usually does not have this background information, nor does he have that rapport which the good team physician invariably has established with his charges.

The medical problems which arise usually fall into two categories: (1) Should a student who has some pre-existing disease or physical disability be permitted to participate in sports? (2) When may the athlete resume activity after illness or injury?

EVALUATION FOR PARTICIPATION IN SPORTS

Ideally no one should undertake strenuous physical activity until after having had a careful physical examination. Lip service is generally paid to this view but often such examinations are cursory and haphazardly conducted so that they are of little value. In colleges and universities most students have had an examination prior to or shortly after entry. This type of examination is not apt to be as satisfactory as that made by the physician who is to be responsible for caring for the student throughout his athletic career. The physical examination done by the family physician prior to entry is not always reliable, we have found. For one reason or another important facts of history or physical findings may not be recorded. This frequently is a result of the desire of the student that nothing "bad" be on his record, or his wish to be sure that

he will not be barred from sports participation, even though he knows he has some physical defect. The family physician too frequently yields to pressure from the boy or his family and only after some unfortunate occurrence does the physical disability come to light. Then, too, a physician familiar with sports can size up the physique and ability of the student and ensure that he enter into competition with others of similar abilities, rather than to permit gross mismatching. Some individuals have such poor muscular co-ordination that they are awkward and participation in some sports will mean they are a hazard not only to themselves but even to their teammates and their opponents. Such boys should not be barred from athletics, but guided into activities where risk of injury to themselves or others is minimal.

You are familiar with specific conditions which require restriction of athletic endeavors, but I would like to discuss some of them briefly. Cardiac disease is usually considered a contraindication to competitive athletics. This policy should be adhered to even though there may be little likelihood that the existing condition will be aggravated by the proposed activity. The public and even a major portion of the medical profession are too heart conscious for any physician or educational institution to run even the slightest risk. If there should be any untoward event, even though not necessarily related to the pre-existing condition, a violent storm of criticism would undoubtedly result. Actually some outstanding athletes, even of Olympic calibre, have had well-marked valvular heart disease. On the other hand, the attitude and advice of the doctor should be such that the student does not develop a cardiac neurosis and become a cardiac invalid. We see this happen rather frequently as a result of overconservative management of cardiac murmurs, either functional or minor organic in nature, and such a neurosis is difficult to correct. The physician in his advice to students with heart disease should stress what the student can do, rather than what he must not do. In most instances the student may lead a perfectly normal life, with perhaps restriction of only the most strenuous or sustained forms of physical activity.

At times it may be difficult to differentiate between functional murmurs and organic murmurs of lesser severity. The medical history may be helpful. If the murmur is known to have been present

from early life it suggests a congenital lesion. If it appeared after an obscure illness or a more typical attack of rheumatic fever, it is more likely that organic heart disease is present. The electrocardiogram is rarely helpful in the borderline case of this sort. Measurements of cardiac area and transverse diameter are of value. If these are normal, one feels it is safe to permit athletic participation under close observation with repetition of cardiac measurements after a time. We believe that in the college age group the upper limit of normal for transverse diameter of the heart should not exceed the predicted value by more than 10 per cent. Cardiac area, however, may be 15 to 20 per cent above the predicted value before being considered abnormal. The standard tables do not make enough allowance for the normal variation of cardiac area in this age group.

Wolffe has made some interesting observations on the heart of the athlete.[1] He found that about one-quarter of athletes had hearts whose transverse diameter exceeded the predicted value by 10 per cent or more. The cardiac area was similarly increased in about 50 per cent. Also, he found that many athletes had hearts appreciably smaller than the values predicted from the table for height and weight. He noted that there was no relationship between heart size and the strenuousness of the sport in which the athlete participated, and he expressed the view that so-called "athlete's heart" is a myth.

High blood pressure is a cause for rejection if it is a manifestation of underlying conditions such as nephritis, coarctation of the aorta, and pheochromocytoma, or is of a severe degree. If such conditions have been ruled out and the systolic pressure is not over 180 mm. of mercury, physical activity is not likely to prove harmful; on the contrary we have seen blood pressure readings fall during a period of athletic training.

Cureton has reported that he has been able to demonstrate consistently a progressive reduction of both the systolic and diastolic pressures during programs of physical conditioning extending over periods of six months and longer.[2] He believes there is evidence

[1] J. B. Wolffe, M.D., The Heart of the Athlete, *J. Lancet, 77:* 76–78, 1957.
[2] T. K. Cureton, Relationship of Physical Fitness to Athletic Performance and Sports, *J.A.M.A., 162:* 1139–1149, 1956.

that favorable adjustment of the cardiovascular system, usually with lessening of peripheral resistance, occurs during such periods of physical training, especially of the endurance type.

Active kidney disease is a cause for limitation of physical activity. It has been suggested recently that a history of pervious nephritis, regardless of the present status, should be reason for restricting athletics. This is based on studies of Alyea and Parish, in which red blood cells, albumin, and casts were regularly found in the urine of athletes after both contact and noncontact sports, but in lesser quantity after the latter.[3] The degree of abnormality tends to be proportional to the severity and duration of exercise. This was interpreted as indicating that strenuous physical activity causes renal injury, and therefore it would be unwise to expose kidneys which had been injured in the past by disease to the further injury imposed by exercise. I feel that this requires further substantiation before such belief is accepted, for I know of no evidence that the effects of exercise cause any degree of permanent injury or are cumulative. In fact the abnormal constituents of the urine usually disappear within twenty-four hours after the exercise.

The cause for the urinary changes is not clear, but some evidence suggests that renal ischemia may be responsible. White and Rolf showed that renal blood flow may fall to 25 per cent of normal during severe exercise.[4] It is known that when renal blood flow falls to 15 to 20 per cent of normal during shock there is resultant ischemic damage to the nephron.

Renal blood flow approximates one-quarter of the cardiac output at rest and comprises the largest source for diversion to muscles during exercise. To some degree, perhaps, athletic performance may depend on the ability developed during training to accomplish this diversion of blood flow from the kidneys to the musculature. It has been suggested that athletes may be coming uncomfortably close to accepting transient renal hypoxia as the price of athletic achievement.[5]

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[3] E. P. Alyea and H. H. Parish, Renal Response to Exercise—Urinary Findings, *J.A.M.A.*, *167:* 807–813, 1958.

[4] H. L. White and D. Rolf, Effects of Exercise and Some Other Influences on the Renal Circulation in Man, *Am. J. Physiol.*, *152:* 505–516, 1948.

[5] Annotations, Renal Response to Exercise, *British Med. J.*, *5107:* 1282, Nov. 22, 1958.

Epilepsy is not a contraindication to participation in sports, except contact and the more strenuous types, if the condition is controlled by medication or the seizures are infrequent and the person experiences a definite aura, unless it is found that fatigue is a precipitating cause of seizures. Swimming perhaps should be contraindicated. Certainly swimming alone is not permissible, and the wisdom of permitting any swimming is doubtful. Epileptic seizures have been incriminated in drownings of expert swimmers even when the victims were taken from the water almost immediately after being stricken with what was assumed at first to be a heart attack.

People with diabetes may participate in athletics if they have learned to manage the disease so that they can avoid hypoglycemia. If this can be done successfully, there seems to be no contraindication to competitive sports. There are several athletes of championship caliber who have diabetes.

Absence or loss of function of one of any paired organ is frequently considered to be sufficient reason for barring a student from contact sports. Such reasoning is sound, for although injury causing loss of an eye or kidney or testicle is rare the catastrophic consequences of such an injury preclude taking even a slight risk. One must realize, however, that there will be some who will ignore advice and will engage in unorganized and unsupervised sports, where the risk of injury is appreciably greater than in the organized program, where supervision and proper protective equipment is provided.

Asthma usually does not present much of a problem, for if the student is having symptoms he will not attempt much sports activity. In the interval when there are no symptoms activity need not be restricted.

Chronic hepatitis, as indicated from history or present findings, is definitely a cause for restricting physical activity, for an exacerbation of the disease may follow strenuous exercise and fatigue, so there can be no justification for permitting activity which will impose an additional burden on an organ already so damaged that it has no reserve, else there would be neither signs nor symptoms of hepatic disorder.

A history of repeated cerebral concussions should be carefully

sought at the time of the original evaluation for sports participation and if obtained it is a cause for restriction from contact sports. Some individuals, whether because of the residual effects of their first concussion-producing injury or some other factor, seemingly are especially prone to sustain cerebral concussions, and we feel it is unwise to let such individuals expose themselves to the risk of repeated injuries of this type.

RESUMPTION OF PHYSICAL ACTIVITY AFTER ILLNESS

It is difficult to establish criteria which will enable a physician to say with certainty when strenuous athletic activity may be resumed after an illness. Certain laboratory tests or other objective findings may be helpful but cannot be relied on with finality. The judgment of the physician and his knowledge of the student must enable him to make the decision, often relying more on the art of medicine than on purely scientific observations.

In the college athlete illness is usually of short duration and causes no great problem, for in most instances he may be allowed to follow his own inclination in resuming physical activity. Occasionally a prolonged or more serious illness occurs, and the physician must assume responsibility for determining how soon physical activity can be resumed safely and then for guiding the return to competitive physical fitness. Illnesses of this type most commonly seen are infectious mononucleosis, pneumonia, either viral or bacterial, and infectious hepatitis. Other diseases will be seen occasionally, but the problems they present are generally similar.

Infectious mononucleosis has a reputation as a disease that is apt to be prolonged, requiring a long period of convalescence before normal activity can be resumed. We have found that this reputation is often fulfilled when the student is under the care of the home physician. If the student remains on campus under the care of our staff, it is unusual for the period of absence from classes to exceed two or three weeks. Hoagland has observed, based on his experience with cadets at the United States Military Academy, that recovery from infectious mononucleosis is rarely prolonged in

highly motivated individuals.[6] We have noted that slow recovery from this, and from other diseases, is often a symptom of emotional difficulty.

There are no definite criteria which can be used to establish when athletic training can be resumed after illness with infectious mononucleosis. Laboratory tests such as the white blood cell count, differential count, or the heterophil antibody determination are extremely variable and bear no constant relationship to the severity of the disease or to the stage of recovery. In general it seems that the best guide to follow in allowing activity after the febrile stage is past is the patient himself. How does he feel? If he feels like increasing his physical activity, let him try it but insist that he stop as soon as he feels tired. The amount of activity may be increased day by day, avoiding marked fatigue. Extreme fatigue probably prolongs convalescence. An exception to following the inclination of the patient is the persistence of an enlarged spleen. Then strenuous physical activity, and especially contact sport, must be avoided to lessen the chance of rupture of this organ. Due allowance must be made for the personality traits of the individual patient; some may need to be pushed, some held back. The doctor who knows his athletes well from working closely with them is usually better able to tell what is necessary than is the physician who may have seen the athlete only during the acute illness.

Pneumonia has in recent years, with a few exceptions, been a relatively mild illness. Bacterial pneumonias have been made so by the use of antibiotics, again with the occasional exception of an antibiotic resistant staphylococcal pneumonia. And even viral pneumonia has seemed less severe and prolonged than it was fifteen years ago. Little credit should be given to antibiotics for this, even though they are widely used. In well-controlled studies there is no clear-cut evidence that antibiotics materially influence the course of viral pneumonia.

Unless there has been a complication or a prolonged period of illness, gradual resumption of physical training can be started when the temperature has been normal for a few days, the chest

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[6] R. Hoagland, Infectious Mononucleosis, *Am. J. Med.*, *13:* 158–171, 1952.

x-ray shows partial or complete clearing (it is not always necessary to wait for all x-ray evidence to disappear), coughing is no longer troublesome, and the patient feels like resuming activity.

Occasionally during pneumonia or other acute infections the chest x-ray will show an unsuspected enlargement of the heart. The exact significance of this is uncertain but it probably indicates some degree of myocarditis. Electrocardiograms will sometimes show minor changes compatible with this view. When asymptomatic cardiac enlargement is found, physical activity should be limited, class attendance and the usual everyday activity may be permitted, and further observations should be made of heart size. It will usually return to normal in a few weeks, and gradual increase in exercise can then be started.

The management of infectious hepatitis has been a controversial subject, but the general tendency has been to restrict physical activity drastically both during the acute illness and for a prolonged period afterwards. Chalmers and his associates carried out a well-controlled study in an army hospital during the Korean War.[7] They recommend that bed rest be instituted early and be continued during the acute phase only and that ad lib. activity in the room be allowed as soon as the patient feels like it. They found the most useful laboratory studies to be the bromsulphalein retention test and the serum bilirubin determination. The critical values for these tests were 6 per cent bromsulphalein retention and 1.5 mg. per cent serum bilirubin. When these or lower values were maintained for a week, graduated reconditioning exercise was begun. There were no true relapses on this program although in a few individuals there were transient rises in one or both of the values for dye retention and serum bilirubin level. However, these returned to normal values even though the same level of physical activity was maintained. Careful observation and follow-up examinations after a year or more did not disclose an increased incidence of chronic hepatitis or impaired liver function as compared to the group which had been on prolonged rest during the convalescent period.

[7] F. C. Chalmers *et al.*, The Treatment of Acute Infectious Hepatitis, Controlled Studies of the Effect of Diet, Rest, and Physical Reconditioning on the Acute Course of the Disease and on the Incidence of Relapses and Residual Abnormalities, *J. Clin. Invest.*, *34:* 1163–1235, 1955.

Apparently in infectious hepatitis just as in infectious mononucleosis the way the patient feels is a good guide to use in deciding how soon and in what amount physical activity can be allowed.

Fatigue which is chronic or unexplained is seen in athletes as well as in other students, and when there are no other symptoms of illness it presents a diagnostic problem. The most frequent cause for fatigue in this age group is psychological, but how can the doctor be sure that organic disease is not present? Again the information the team physician has gained from day-to-day observation is invaluable. If the student is known to be worried, or under a great deal of pressure, or has shown signs of "going stale," it supports the probability of psychologically caused fatigue, and the physician may be justified in observing for a little while. If there is no indication of such factors, study must be undertaken. This should include careful history, physical examination, including a series of temperature recordings, and laboratory tests such as blood count, urinalysis, and sedimentation rate. Other tests may be used if they seem indicated by any findings in the history or physical examination. If all investigations are normal, watchful waiting is indicated. Recovery from the fatigue may occur shortly, or if important organic disorder is present it will become manifest under continued close observation.

The search for a diet which will bolster the performance of athletes is filled with fads and fancies. The truth of the matter is that athletes, just as other people, require only a balanced diet adequate in the known essential substances and providing sufficient calories so that weight can be maintained. Beyond this, the addition of more protein, vitamins, minerals, or any special food accomplishes nothing, unless perhaps psychologically. Psychological factors cannot be ignored, and what the athlete likes and believes is good for him is important. The belief that strenuous physical activity requires a large intake of protein is not based on fact, for protein is not metabolized in appreciable amounts during strenuous physical activity.[8] A moderate increase in dietary protein possibly may be justified during the early stages of training, when muscle mass is being built up. It is believed that adequate stores of carbohydrate

[8] T. B. Van Itallie, L. Sinisterra, and F. J. Stare, Nutrition and Athletic Performance, *J.A.M.A.*, *162:* 1120–1126, 1956.

are desirable before the start of prolonged physical activity, as the lowering of blood sugar levels may lead to excessive fatigue.

Excessive sweating, resulting from strenuous athletic activity in a hot environment and often accentuated by heavy protective padding which retards skin cooling, can produce sodium deficiency with resultant impairment of athletic performance before the onset of recognizable symptoms, such as heat cramps or hyperpyrexia. Some way should be provided to supply the extra sodium needed under such conditions. This can be done by the use of a dilute solution of sodium chloride, which is usually better tolerated by the digestive tract than are salt tablets.

I would like to mention the practice of making weight for certain athletic events, chiefly to condemn it as it is often practiced—that is, when the contestant reduces to considerably below his ideal weight. In addition to other undesirable aspects, I feel sure that in many instances marked weight reduction is self-defeating, for an athlete who has been on a drastically reduced diet, with fluids restricted and sodium stores depleted by sweating off the last few pounds cannot perform at his peak level of ability.

As I have indicated, I believe that the team physician can and should acquire much of the knowledge and skill of the internist so that he can provide almost complete medical care for athletes. There are two general situations where he should obtain the help of a competent consultant. First is the difficult case when he may be uncertain as to the proper management. Second, he may have no doubt as to what needs to be done but feels the need to obtain support for his views, such as may happen when a star athlete should be kept out of competition for a prolonged period or if the case has possible medicolegal implications. In this field of medicine, as in all others, consultation should be obtained promptly if there is any suggestion of need for it.

The sports physician can and should play the major role in most decisions concerning the care of athletes. The internist on occasion can provide him with invaluable advice and support.

Cost Analysis and Budgeting in Student Health Services*

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AT the time I was asked by Dr. Joseph B. Trainor, President of the Pacific Coast College Health Association, to talk about cost analysis and budgeting for college and university student health services, I wondered how a talk about money would strike a group whose major professional concern is to treat and care for the sick. When a doctor or a nurse gives a patient an injection of penicillin, they are not likely to think of how much it costs. But it costs, and always the same amount, whether given at a student health service or at a private physician's office. In fact, there is a unit cost for every single medical and hospital procedure.

In talking to many of you working in student health, I have found that you want to understand how to give the best possible service at the lowest possible cost. With proper management you can get more for every dollar you spend. And you spend many dollars. Hospitals are now the fifth largest industry in the United States with assets of more than $14 billion. Last year operating expenses alone ran to some $7 billion. In 1958 hospitals employed about 1,464,829 people.[1]

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* Revision of an address presented before the Pacific Coast College Health Association, San Francisco, Dec. 6, 1958.

[1] U.S. Bureau of the Census, *Statistical Abstracts of the United States* (79th ed.; Washington, D.C.: Govt. Print. Off., 1959), p. 78.

Thus, whether we like it or not, hospitals are big business. The rising total cost of student health services—an important segment of the hospital business—makes us big also. Therefore, we cannot get the most for the money entrusted to us for medical and hospital care for college students unless we understand and use big-business management techniques. The advances made in medical sciences have greatly increased a patient's chances for full recovery with a reduced loss of the patient's time. But his medical and hospital care costs a great deal more than it used to, having zoomed even higher than the extreme inflationary increases of all other business.

Mr. George Bugbee, President of the Health Information Foundation, had this to say about the problems facing hospitals and the medical professions: "We live in a period of transition that requires a [knowledge] of health affairs that far exceeds what we needed to know when medical science was less complex, and paradoxically, when our goals for the nation's health seemed much more remote than they are today." [2]

By 1970 it is expected that we will be responsible for the medical care of more than six million college students—twice as many as we care for today. If we are to take full advantage of the scientific advances of the future, we must understand and respect the economic problems that arise with each new and, alas, more expensive treatment.

Properly understood, the techniques of budgeting, cost accounting, and cost analysis eliminate waste and duplication and immeasurably improve student health services. Moreover, dollars saved in this way can be used to buy more service. The medical and hospital program is our chief concern; the financial program exists merely to facilitate its most effective operation.

I know that physicians place great importance on methods for obtaining information about patients. Further, they have developed a uniform method of recording their findings so that information about each patient can be analyzed and evaluated for proper diagnosis. Otherwise, they could not determine what the proper management of a case should be. Physicians also have a uniform way of following the patient and his response to treatment. The

[2] Address to the Board of Directors, Health Information Foundation, New York, May 16, 1958.

results of diagnostic tests, clinical findings and other information is recorded and periodically reviewed. But if all this information were simply recorded and not used, it would be a waste of time and effort.

Similarly, to manage any business—including a college health service—it is necessary to obtain and record information in a uniform way for analysis and evaluation. The manner in which the information is obtained in the case of a business may differ from the methods used to obtain information about a patient. But in both cases, the main consideration first is to obtain the information and then to record it in a way that reveals actual conditions.

While I do not propose that physicians should be trained as cost accountants or management analysts, I feel that they should know the basic principles of administration and fiscal management. The best plan for physicians who direct student health services—particularly in smaller colleges—without trained administrative personnel on their own staff is to rely upon qualified accountants for the information needed for efficient management. The college or university accounting officer can furnish information about the business transactions of the student health service. Accountants also help to prepare and interpret financial reports, budgets and programs. Get to know your college accountant and make him part of your management team.

The recording of business transactions is simply a record-keeping function of the financial affairs of each health service. Systematic methods of recording business transactions provide information needed to control operational costs effectively. All too often there is duplication and maintenance of unnecessary records, and extreme care should be taken to avoid this. As in the case of medical records, there is no point in collecting facts simply because they are facts. Unless information is needed for patient care or for a specific management function, it should not be collected.

Although technical and complicated, budgets are not as abstruse as generally thought; today we recognize that a budget should be more than a set of cold figures of proposed expenditures for a given fiscal period. Neither should a budget be considered as unnecessarily limiting your program. A budget is also more than planned expenditures balanced by feasible schemes for raising money to

meet them. A good budget is an operational plan for the work of an organization—in our case a student health service—which tells the source of income and how much money is needed to get the work done. As already noted, the work plan is basic and dictates the financial plan. Failure to understand what a budget is has led to much confusion and misunderstanding on the part of administrators, trustees, and the general public.

Management is responsible for preparing an operating budget the purpose of which is to forecast income and costs accurately and to control expenditures. To develop an operating expense budget for a student health service it is necessary to set standards of care and to determine the kind, type, and amount of contracted services desired. Then units of service for which funds will be needed can be estimated. We have reliable data on use of services for projecting anticipated demand.[3]

Since budget-making is a technical process, to be successful it must be carried on by technically trained people. If the task of the budget officer is merely to assemble a large number of alternative expenditure plans prepared by department heads based on previous years, the job could be done by an amateur. Today no intelligent board member or college president would accept a budget prepared on this notion. A budget officer must know not only the entire scope of each department but also how it fits into the total college operation. He must visualize organizational activities in terms of units of work. He must determine costs and estimates of expenditures on a work-plan unit-cost basis.

Department heads must know their responsibilities in the budget-making process. Generally, they are required to prepare an estimate of departmental expenditures which tells budget officers the full story of their program. The program and its essential work units can then be converted to dollar amounts necessary to maintain contracted services at recognized standards. The major problem of agencies bogged down in budget troubles such as inadequate funds is that they do not give the kind of information needed to convert work units into dollar amounts. This is particularly true

[3] John R. Moore, "A Six-Year Study of Student Health Services at the University of California," unpublished MS, University of California, Cowell Memorial Hospital, Berkeley, Calif.

of student health programs. The more the budget officer knows about your program, the better will be his opportunity to help you obtain necessary funds.

Once the budget has been prepared, submitted, and approved, the job has just begun. Budget making is a continuous process. For clarity we describe it in its relation to a single fiscal year. But if we are to look forward and backward, each budget must be seen as a link in an unbroken chain. Therefore, the budget process must include the following steps:

1. Preparation of the departmental work plan.
2. Work load and financial estimates based on the departmental work plan.
3. Review and evaluation of the departmental budget by a central budget office. It is important that the review be made in cooperation with the department head. Usually an adjustment of the amount estimated will effect the projected work plan. This type of adjustment should be cleared with the health service director.
4. During the fiscal period, budget estimates should be compared with the actual expenditures of planned objectives.
5. The expenditure control system should permit prompt recognition of a financial problem in order to allow execution of alternate or emergency plans.

In summary:

1. The first and most important responsibility of the individual department is to prepare a work program for the fiscal year under consideration. The work program should be divided into elementary units of work or activities, e.g., entrance medical examinations, teacher credential examinations, out-patient emergency and drop-in treatment, infirmary care.
2. The second step is to establish work units of ongoing, new or revised programs.
3. The last step is to combine the work program with an estimate of its cost for the budget officer. Those who review the budget must thoroughly understand the program and be able to convert it into dollar amounts.

If this procedure is followed, there will be fewer problems in making up a budget, and college heads and governors will have a

better understanding of the aims and operations of health service programs. Sadly, many college administrators and board members think it too expensive precisely because they do not understand it.

Another important tool for sound financial management of health service programs is cost accounting, a system of recording total over-all costs by keeping track of the cost of each unit of goods or services. Over-all costs which include direct and indirect material and labor are expressed in terms of cost per unit, e.g., cost per entrance medical examination, cost per infirmary day, cost per patient-meal.

Cost accounting supplies management with two essential kinds of information: (1) actual costs applicable to a function, combination of functions, or program; and (2) the actual average cost of producing specific goods or units of service. In a hospital or student health program the following kinds of unit cost information could be furnished readily by a good cost-accounting system: (1) cost per physician out-patient visit; (2) cost of individual x-ray and laboratory tests; (3) cost per meal; (4) cost per patient day; (5) cost per entrance medical examination; (6) total cost for the out-patient program expressed in terms of the average cost for one patient; and (7) total cost for the in-patient program expressed in terms of the average cost for one patient per day.

By using good cost records and analyzing the data, we can find the operations that cost too much for the services given and determine why costs are too high. Wherever we find that a specific service could be run more economically, expenses should be reduced immediately to the minimum consistent with the quality of service desired. Because we do not operate for profit we are all the more obligated to furnish services at a minimum cost.

Many college administrators believe that cost-accounting records are too expensive for a small organization. Actually, cost information can be very easily developed from general accounting records —kept today even by the smallest of organizations—which keep track of assets, liabilities, capital investment, income and expenses, amounts owed to and by the business, and income and expenses in a variety of classifications and groupings. But, because general accounts usually are not properly organized, it is not possible to obtain relevant cost information from them. Frequently it is neces-

sary only to rearrange them so that valuable cost information can be had at little or no additional cost.

Cost accounting is simply a means toward improved and economical management whereby we can get maximum value for minimum cost. This year a cost-accounting system was put into effect at the University of California Berkeley Student Health Service. The information obtained has already paid off in reduced costs and better use of funds. We expect to effect even greater savings the more familiar we become with the system.

I urge all student health service directors to discuss with the accounting officer of their college the possibility of developing a cost-accounting system geared to their own health service. If the accounting officer understands what you need he can advise and assist you in the development of this type of program.

Therapeutic Trial of Gamma Globulin in Infectious Mononucleosis*

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THIS is a report of a study undertaken to ascertain the effect of treating patients with infectious mononucleosis with human immune gamma globulin.

Since infectious mononucleosis is a disease especially common in the young adult age group, it is responsible for considerable loss of time from studies by university students. Accordingly a therapeutic trial of gamma globulin was undertaken at the Cornell University Infirmary. A review of the literature reveals few reports of previous attempts to treat the disease with gamma globulin, although it would seem logical to assume that gamma globulin given early enough in the course of the disease should prevent or modify the illness.[1]

METHOD

All of the subjects in the study were Cornell students who were admitted to the Cornell University Infirmary during the 1958–1959 academic year with a confirmed diagnosis of infectious mononucleosis. There were sixty-one patients in the study, thirty-three of

* The gamma globulin used in this study was provided by The National Foundation.

[1] R. A. Steadman, Use of Human Immune Gamma Globulin in the Treatment of Infectious Mononucleosis, *J. Tennessee State Med. Assoc.*, *46:* 458–460, 1953.

whom received gamma globulin while twenty-eight were controls. Every other patient admitted with this diagnosis was treated with 10 cc. of human immune gamma globulin intramuscularly, in addition to the standard symptomatic treatment given to all the infectious mononucleosis patients. The patients were cared for by the various attending physicians, and their usual methods of treatment, including antibiotic therapy, was in no way interfered with or altered for the purpose of the study.

For this trial a patient was considered to have infectious mononucleosis if the white blood count showed polymorph-lymphocyte ratio reversal and the lymphocytes were identified as including Downey cells. In addition a positive heterophil was mandatory, though if the white blood cell count showed a typical picture treatment was not delayed until the heterophil became positive. The heterophil test used was the "Stat" Heterophil Agglutination Reaction as described by Fennel,[2] a titer of 1:200 is considered equivocal and above this titer positive.

For each patient in the study a work sheet was used, and on this were recorded each day all symptoms and signs and the results of laboratory work. The investigations done were white blood cell count, urine for bile, heterophil and thymol turbidity every three or four days, in addition to a routine urinalysis and hemoglobin determination on admission and other liver function tests where clinical findings required them.

RESULTS

The data from this study will not be presented in detail but the most interesting areas will be discussed briefly.

Duration of Illness

The patients in the treated group complained of symptoms for an average of 5.7 days before admission while those in the control group reported symptoms for an average of 8 days. The distribution of these is shown and it is interesting to note the peaks at 7 and 14 days—probably indicating that after one week the time since onset is not accurately reported.

[2] E. A. Fennel, *Proceedings of the Staff Meetings of the Clinic, Honolulu, 14:* 20, April 1948.

Table 1. Number of days from onset of symptoms to admission

	1	2	3	4	5	6	7	8	9	10	12	14	21
Treated group	6.1*	15.2	9.1	18.2	3.0	6.1	21.2	6.1	0	6.1	0	9.1	0
Control group	3.6	7.1	7.1	17.9	3.6	0	21.4	3.6	0	7.2	3.6	21.4	3.6

* These figures are given as percentages of total in each group.

The average stay in hospital was 10.9 days in those treated and 9.6 days in the controls. The total period from reported onset of symptoms to discharge was 16.6 and 17.6 days respectively. Thus, there is no evidence that the giving of gamma globulin significantly shortened the duration of the illness.

Signs of Symptoms

No significant differences were found between the occurrence or duration of symptoms in the two groups. It is noted that in the control group 21 per cent of the patients had palpable spleens on admission while only 6 per cent of the treated group did so. However, during the hospital stay the spleen was palpable in both groups in about 60 per cent of the patients. One interesting finding is that of palatal ecchymosis in 33 per cent of the treated group and in only 3.5 per cent of the control group. As these are usually found early in the course of the disease this difference could be accounted for by the duration of symptoms prior to admission. The duration of fever was similar in the two groups being 7.6 days in the treated group and 7.9 days in the control group. The average highest temperatures were 101.9 and 101.4 respectively.

Laboratory Studies

White blood counts which showed polymorph-lymphocyte ratio reversal were obtained on an average of 7.5 days after the onset of symptoms in the treated group and 8.6 days in the control group.

The time at which the heterophil became positive—i.e., over 1:200—did not differ significantly between the groups, and the distribution of the titers obtained was very similar.

The control group showed 89 per cent with raised values for the thymol turbidity test, (over 4 units) as compared to 85 per cent in the group treated with gamma globulin.

CONCLUSION

In a group of sixty-one patients with confirmed diagnosis of infectious mononucleosis, thirty-three were treated with 10 cc. of human immune gamma globulin while the control group of twenty-eight patients received the usual symptomatic treatment. No significant differences were found in the duration of the illness, severity or occurrence of symptoms, occurrence of complications, and duration of fever or maximum fever. The laboratory studies showed no alteration in the white blood count, heterophil or thymol turbidity. The number of patients in each group treated with antibiotics for throat infections was very similar. Thus, it would appear that the giving of human immune gamma globulin to patients immediately a diagnosis of infectious mononucleosis is made does not decrease the length or severity of the illness. It may be that if the gamma globulin were given earlier that it would modify the disease, but as contacts and time of contact are rarely known this is not possible in the university population.

Mental and Emotional Screening as a Part of the Health History*

THOMAS J. GRAY, M.D., SAN JOSE STATE COLLEGE

A mental and emotional screening section has been added to the Student Medical History form used at San Jose State College in an effort to make the record more comprehensive as an instrument dealing with the "whole person in the whole situation" (see Appendix 1 below).[1] This is in keeping with the dictum that there can be no separation between the mental and the physical and that efforts to so classify are not only artificial but misleading and fraught with danger.

Although it is in this general field that the number one health problem lies, unfortunately it is one of the most frequently neglected parts of the medical history. The importance of the problem as it applies to our circumstances is illustrated by the results of a recent survey of teachers' health records in the Los Angeles city school system covering the years 1942–1943 through 1953–1954.[2]

* Grateful acknowledgment is hereby extended to Mrs. Helen R. Smith, Supervisor of Nurses, and to my secretary, Miss Genevieve Stumpff, and their respective departments for the indispensable efforts of all concerned in the preparation and the collecting of forms and the tabulation and compiling of results.

[1] A copy of the entire medical history form may be obtained from the author, Dr. Thomas J. Gray, Director, Student Health Service, San Jose State College, San Jose, California.

[2] The Health Education and Health Services Branch, Auxiliary Services Division, Los Angeles City School Districts, *Teacher Health* (No. 7 in a Series of Evaluation Studies of Health Education and Health Services), Los Angeles City School Districts, 450 North Grand, Los Angeles.

The survey showed that nervous and mental disorders constituted the greatest single cause of teacher absence and separation. This is in general agreement with many other similar surveys.

The new section consists of a series of questions for self-appraisal prefaced by the statement:

The following is designed as an opportunity for you to indicate personal problem areas in which you feel that you need improvement or assistance. Obviously your answers require your best efforts at honest self-appraisal, and it is again emphasized that these records are held in strict confidence within the Health Department and are not used to penalize.

The questions are offered in shortened, "clipped" style so as to facilitate ease and rapidity of reading and response and also to limit mulling over, reading into, and qualifying. For the purpose of screening, "Yes" responses are considered positive for the first series and "No" responses for the second. The section is concluded with the question "*Would you like advice or help on any of these questions or on any related problems?*"

It is to be emphasized that this section is not a test in any sense and has no validity as such, either on an individual or group basis. The questions have been extracted and adapted from some of the newer learning-maturity concepts and represent some of the more significant stress areas in the general field. The section itself has no specific diagnostic value, and the drawing of specific conclusions from it is unwarrantable. The questions are a *means* rather than an end, serving as an introduction only to a comprehensive follow-up personal interview.

In this sense the series is an "ice-breaker," a method of breaking the barrier of reserve generally surrounding these problems, often insurmountable, particularly when dealing with new students and patients in surroundings strange to them. In fact, the barrier is often just as insurmountable with "old regular patients," perhaps because of the very intimacy of rapport involved. It has been found from experience with the Cornell Medical Index that initially patients will more readily indicate distress in these spheres of living on an official form or blank than during a face-to-face interview. It may be conjectured that not only are these things difficult for people to articulate and express, but also the relative impersonality

of a routine form may well afford a temporary stratagem of face-saving with respect to the stigma generally attached to these problems.

The response of incoming students far exceeded expectations (see Tables 1 and 2 for tabulation of results). The comparative results of two different incoming groups (school years 1957–1958 and 1958–1959) shows remarkable uniformity. In each of these school years about 85 per cent of the students indicated some degree of trouble in the general field, varying from a single positive answer to many. Approximately 65 per cent gave evidence of significant difficulty by indicating several positive answers. Help or advice was requested by 18 per cent in the 1957–1958 group, whereas approximately 12 per cent requested help or advice in the 1958–1959 group. This difference must be explained by an interim revision of question 65. In the first series the question read "Would you like advice or help on any of these questions or on any *other* problems?" The word "*other*" was changed to "*related*" for the second group. Consequently it is felt that the latter figure is the more reliable.

The general response was gratifying in the sense that it verified the existence of the general problem and also in the sense that it lends a note of healthy hopefulness in a field generally regarded as discouraging, to say the least. The first step in the solution of personal problems is the admission of their existence. Although some questions have been obviously avoided, for the most part the students seem to have been serious in the undertaking. It is significant to note that many of the history forms have been endorsed by parents and, on a few occasions, two separate sets have been presented for a given student—one by the parents and one by the student.

Several interesting responses and elaborations have been received, such as:

1. In connection with the question "Worried about sex," the entire question was circled, and a qualifying statement added "Have my own standards—torn between what I consider right and the attitudes I find in my peers and even my elders."

2. To a record filled with almost all positive responses a statement was added "Would like to be psychoanalyzed."

Table 1. Tabulation of individual positive responses

School year		1957–1958	1958–1959
Question	Answer	Total	Total
1. Frequently ill?	Yes	28	38
2. Frequently injured?	Yes	24	30
3. Worry excessively?	Yes	379	398
4. Trouble sleeping?	Yes	143	199
5. Overly shy, self-conscious?	Yes	329	376
6. Feelings easily hurt?	Yes	605	636
7. Often unhappy, depressed?	Yes	270	295
8. Often cry?	Yes	109	107
9. Nervous, shaky, tense?	Yes	364	405
10. Difficulty making up your mind?	Yes	817	855
11. Bothered by crowds?	Yes	191	244
12. Life often seem hopeless?	Yes	92	123
13. Often think about death?	Yes	185	223
14. Anger easily?	Yes	561	690
15. Often "blow your top"?	Yes	324	324
16. Easily irritated?	Yes	743	816
17. Have trouble relaxing?	Yes	505	556
18. Often feel afraid?	Yes	179	222
19. Ashamed of feeling afraid?	Yes	164	169
20. Have frightening dreams?	Yes	123	146
21. Afraid of losing your mind?	Yes	30	76
22. Have trouble getting along with others?	Yes	70	84
23. Often feel lonely?	Yes	385	494
24. Dislike many people?	Yes	57	91
25. Have enemies?	Yes	225	310
26. Worried about sex?	Yes	106	121
27. Often feel others are against you?	Yes	112	140
28. Often disappointed by people?	Yes	517	673
29. Often feel guilty?	Yes	177	229
30. Daydream frequently?	Yes	957	980
31. Frequently jealous?	Yes	276	334
32. Worry about dying?	Yes	75	97
33. Ill at ease with strangers?	Yes	650	679
34. Difficulty adjusting to changes?	Yes	188	210
35. Very emotional?	Yes	460	516
36. Have strong dislikes, hates?	Yes	415	522
37. Worried about the past?	Yes	95	118
38. Worry about the future?	Yes	882	1095
39. Frequently feel sorry for yourself?	Yes	247	312
40. Often pessimistic, bitter?	Yes	103	246

Table 1—continued

School year		1957–1958	1958–1959
Question	Answer	Total	Total
41. Often feel inferior?	Yes	568	619
42. Difficulty expressing yourself in conversation?	Yes	738	839
43. Argue a great deal?	Yes	517	498
44. Difficult to admit being wrong?	Yes	596	671
45. Like to give orders to others?	Yes	970	1285
46. Difficult to be friendly?	Yes	115	116
47. Often bothered by conscience?	Yes	296	378
48. Worry about health?	Yes	203	231
49. Alcohol a problem?	Yes	0	7
50. Gambling a problem?	Yes	26	9
51. Difficulty keeping cheerful?	Yes	166	202
52. Frequently criticize others?	Yes	552	540
53. Dislike being alone?	Yes	1078	1231
54. Easily discouraged?	Yes	370	388
55. Usually make the best of a bad situation?	No	278	381
56. Like members of the opposite sex?	No	37	45
57. Do you ever pray?	No	407	492
58. Feel that most people are honest, act in good faith?	No	229	195
59. Believe in helping others?	No	24	32
60. Do you smile often, laugh frequently?	No	146	210
65. Would you like advice or help on any of these questions or on any related problems?	Yes	700	488
Total no. of forms submitted		3,887	4,110
Total percentage of forms with "positive" answers		83	85

3. In connection with the question "Often feel inferior?" the statement was added "Inferiority complex—college as a whole will eliminate remaining complex."

4. In connection with a request for advice or help, the statement was added "Insufficient common grounds (with spouse) but could be worse."

Follow-up interviews frequently result in establishing quite different pictures from those indicated in the preliminary section. In

Table 2. Significant percentages of "positive" answers

Question	Answer	1957–1958	1958–1959
3. Worry excessively?	Yes	9.7	9.7
5. Overly shy, self-conscious?	Yes	8.4	9.2
6. Feelings easily hurt?	Yes	15.5	15.5
9. Nervous, shaky, tense?	Yes	9.3	9.9
10. Difficulty making up your mind?	Yes	21.0	20.8
14. Anger easily?	Yes	14.4	16.8
15. Often "blow your top"?	Yes	8.3	7.9
16. Easily irritated?	Yes	19.0	19.9
17. Have trouble relaxing?	Yes	12.9	13.5
23. Often feel lonely?	Yes	9.9	12.0
28. Often disappointed by people?	Yes	13.3	16.4
30. Daydream frequently?	Yes	24.6	23.9
33. Ill at ease with strangers?	Yes	16.8	16.5
35. Very emotional?	Yes	11.8	12.6
36. Have strong dislikes, hates?	Yes	10.6	12.7
38. Worry about the future?	Yes	22.6	26.6
41. Often feel inferior?	Yes	14.6	15.1
42. Difficulty expressing yourself in conversation?	Yes	18.9	22.2
43. Argue a great deal?	Yes	13.3	12.1
44. Difficult to admit being wrong?	Yes	15.3	16.3
45. Like to give orders to others?	Yes	24.9	31.3
47. Often bothered by conscience?	Yes	7.6	9.2
52. Frequently criticize others?	Yes	14.1	13.1
53. Dislike being alone?	Yes	27.6	30.0
55. Usually make the best of a bad situation?	No	6.9	9.3
57. Do you ever pray?	No	10.4	12.0
65. Would you like advice or help on any of these questions or on any related problems?	Yes	18.0	11.9

the first place, by the time interviews can be arranged with these students, the problems which they have indicated have often been solved by what is most probably just a change of environment—getting away from home and accomplishing their initial adjustment to college. This gives rise to certain questions: (1) Is this simply a temporary clearing of the clouds based upon a temporary change? (2) Does the initial response to the screening represent a momentary apprehension connected with getting ready to "try one's wings?" (3) Is college itself to be considered therapy for many

of these problems, in the sense of placing the new students on their own resources?

Follow-up interviews also demonstrate quite frequently that these responses are really smoke screens obscuring deeper problems which, although generally related, are different and unique. For example, one transfer student admitted that her basic problem was the fact that she was quite seriously in love with her former teacher. Upon interview, this was determined to represent a problem much greater than the characteristic adolescent "crush." Another example involved the problem of jealousy on the part of a male student which, finally, after much anguishing probing, was revealed to have as its basis a long-standing, desperately concealed, and almost completely repudiated hypospadias. It is felt that students with problems of this sort derive the greatest benefit from the procedure, when it is thus utilized as a means of uncovering deeper problems.

It must be added that most of the positive responses represent the specific problems which the questions signify, and they are dealt with directly as they are elaborated upon in interview. Again, it should be stressed that this procedure is not in and of itself a test in any sense, and consequently does not merit any claims for validity or reliability as such. In this connection it must be observed that there is considerable question as to the validity of all personality tests, formal and informal. This can best be brought out by indicating that even the longest of these tests (some including five hundred questions or more) barely begin to scratch the surface of a total of some 18,000 personality traits one can find listed in the dictionary. Going a bit further into the realm of higher mathematics, one finds that if only twenty traits are surveyed, each on a ten-point scale, it is possible to describe one hundred trillion different human beings.[3] Such a situation demonstrates the difficulties imposed by the general problem.

In spite of the lack of any specific validity, it is felt that the results have some significance. They are in general agreement with surveys and reports on the subject from many sources. An examination of the individual question breakdown is also interesting in that

[3] Andrew Salter, *Conditioned Reflex Therapy* (New York: Creative Age Press, 1949).

it agrees with the majority of works in the field of adolescence, for example, a recent survey titled "Teen-age Attitudes." [4]

One is tempted to bring up innumerable questions in connection with the individual response breakdowns; for example, the highest percentage of positive answers were in response to two questions: "Dislike being alone?" and "Like to give orders to others?" These responses suggest many interesting facets. Are these indications, for instance, of the unmistakable direction of our culture with its emphasis on group activity and social expression? Do they indicate a lack of resourcefulness in the face of solitude? Do they represent a typical adolescent reaction to sudden new-found independence, overcompensation on the basis of having had to take orders for so long? Do they show on the one hand an excessive preoccupation with group identification and at the same time a contradictory lack of appreciation of the individual reactions within a group, namely, the fact that people generally do not like to take orders? These interesting questions could be pursued interminably, but that is not the purpose of this presentation.

No effort has been made to question the sincerity of the individual student or to prevent falsification, inasmuch as the follow-up interviews provide verification. The series of questions has simply been offered in good faith to the student, with the expectation of the same in return, the corollary being that it is the student who is the loser if answers are falsified for one reason or another. It is interesting to note that on a few occasions we have had sheepish admissions of facetiousness which proved to be the source of enough embarrassment and difficulty that the students concerned undoubtedly "learned their lesson."

Although we do not regard records showing completely negative responses as representing paragons of maturity, we have no way of getting to these individuals, and all we can say is that at least we gave them a chance. If positive responses represent exaggerations or dramatizations of situations which in reality present no actual problem, it is felt that this in itself demands attention and clarification. If positive responses represent only temporary "mood of the moment" responses, then perhaps the student's mood tend-

[4] H. H. Remmers and D. H. Radler, *Scientific American, 198:* 25–29, June 1958.

encies need investigation. It is felt that the procedure, presented and regarded as it is in this fashion, is in keeping with the best approach in dealing with new students at the outset on the basis of the very maturity which we hope to inculcate. Obviously the entire procedure depends upon the good faith of all the participants, as do all screening tests of this type, including the entire medical record itself.

It is obvious that a procedure such as this demands a plan of action, in accordance with the feeling that we are not justified in developing elaborate methods of screening unless we are prepared to offer some opportunity for remedial correction. It must be admitted that the numbers involved can be somewhat overwhelming in the face of the ordinary circumstances of student health personnel quotas and facilities. Even in large colleges the percentage specifically requesting help may prove to be unwieldy. This is the usual picture in all quarters dealing with this problem, however, and it simply represents the impossibility of providing sufficient qualified personnel to handle the many individuals involved.

The development of a complete and comprehensive program for the general problem of mental and emotional distress is, of course, far beyond the province of this report. Accordingly only a brief presentation of some of the elements of a possible program can be included here.

For the segment requesting help, at least one follow-up interview is mandatory. Ideally, as many interviews as might be necessary should be allowed in order to evaluate the various individual responses and then the entire problem for each patient, with further disposition depending upon the severity of each case. It may be anticipated that the greater proportion of this group can well be handled within the student health service itself, with the provision, of course, for referral of more complicated or severe cases for psychiatric evaluation and more specialized treatment such as, for example, psychiatric or psychological counseling. In the event that not more than a one-shot, cursory follow-up interview can be granted, a suggested self-help program (Appendix 2) is made available by giving a copy to the student.

One of the challenges presented lies in the group (approximately 65 per cent) showing a significant number of positive responses

who apparently do not desire help or assistance or at least do not request it. However, the incorporation of this section in the permanent record does provide an opportunity to reach this group at least indirectly, as they may present themselves for other clinical services during their college career. Many interesting reactions could undoubtedly be uncovered in this fashion at the discretion of the examining physicians concerned.

Referring again to Appendix 2, "Suggested Program for Improvement in Effective Living," ideally this type of program should be co-ordinated with return visits to provide a means of checking on the progress of the individual student. The program is largely self-explanatory and represents the newer learning-maturity school of thought as embodied in the works of John Schindler, M.D.,[5] and others.

A program such as this presents many interesting possibilities for co-ordination along educational lines. Joint projects could be undertaken with departments of health and hygiene or mental hygiene in working out audio-visual adaptations (films, slide projections, cartoons, tape recordings, and the like) for a course titled "Effective Living." The problem could well be the subject for workshops, seminars, and symposia, recruiting contributors from many fields of endeavor.

In summary, a mental and emotional screening section has been presented as a part of the student health history. It is not to be regarded as a test in any sense, but rather as an introduction only to the problem as it affects the individual student; its pertinence and significance depend altogether upon follow-up personal interviews. Incomplete and "sketchy" as it is, it is felt that if it accomplishes nothing more than to advertise the fact that "medical doctors" are interested in this phase of health and encourage an active approach to it, then it has accomplished a worthy purpose. The general response to it on the part of incoming students has exceeded all expectations and demonstrates a high degree of correlative consistency between two successive entering groups (school years 1957–1958 and 1958–1959).

[5] *How to Live 365 Days a Year* (New York: Prentice-Hall, 1954); *Woman's Guide to Better Living* (Englewood Cliffs, N.J.: Prentice-Hall, 1957).

Appendix 1

64. The following is designed as an opportunity for you to indicate personal problem areas in which you feel that you need improvement or assistance. Obviously, your answers require your best efforts at honest self-appraisal, and it is again emphasized that these records are held in strict confidence within the Health Department, and are not used to penalize.

Circle YES or NO. If you feel that certain questions deserve special attention, circle the entire question.

Frequently ill?	Yes	No	Ill at ease with strangers?	Yes	No
Frequently injured?	Yes	No	Difficulty adjusting to changes?	Yes	No
Worry excessively?	Yes	No	Very emotional?	Yes	No
Trouble sleeping?	Yes	No	Have strong dislikes, hates?	Yes	No
Overly shy, self-conscious?	Yes	No	Worried about the past?	Yes	No
Feelings easily hurt?	Yes	No	Worry about the future?	Yes	No
Often unhappy, depressed?	Yes	No	Frequently feel sorry for yourself?	Yes	No
Often cry?	Yes	No	Often pessimistic, bitter?	Yes	No
Nervous, shaky, tense?	Yes	No	Often feel inferior?	Yes	No
Difficulty making up your mind?	Yes	No	Difficulty expressing yourself in conversation?	Yes	No
Bothered by crowds?	Yes	No	Argue a great deal?	Yes	No
Life often seem hopeless?	Yes	No	Difficult to admit being wrong?	Yes	No
Often think about death?	Yes	No	Like to give orders to others?	Yes	No
Anger easily?	Yes	No	Difficult to be friendly?	Yes	No
Often "blow your top"?	Yes	No	Often bothered by conscience?	Yes	No
Easily irritated?	Yes	No	Worry about health?	Yes	No
Have trouble relaxing?	Yes	No	Alcohol a problem?	Yes	No
Often feel afraid?	Yes	No	Gambling a problem?	Yes	No
Ashamed of feeling afraid?	Yes	No	Difficulty keeping cheerful?	Yes	No
Have frightening dreams?	Yes	No	Frequently criticize others?	Yes	No

Ashamed of feeling afraid? ____ Yes No Difficulty keeping cheerful? ____ Yes No

Have frightening dreams? ____ Yes No
Afraid of losing your mind? ____ Yes No
Have trouble getting along with others? ____ Yes No
Often feel lonely? ____ Yes No
Dislike many people? ____ Yes No
Have enemies? ____ Yes No
Worried about sex? ____ Yes No
Often feel others are against you? ____ Yes No
Often disappointed by people? ____ Yes No
Often feel guilty? ____ Yes No
Daydream frequently? ____ Yes No
Frequently jealous? ____ Yes No
Worry about dying? ____ Yes No

Frequently criticize others? ____ Yes No
Dislike being alone? ____ Yes No
Easily discouraged? ____ Yes No
Usually make the best of a bad situation? ____ Yes No
Like members of the opposite sex? ____ Yes No
Do you ever pray? ____ Yes No
Feel that most people are honest, act in good faith? ____ Yes No
Believe in helping others? ____ Yes No
Do you smile often, laugh frequently? ____ Yes No

* * * * * *

65. Would you like advice or help on any of these questions or on any related problems? ____ Yes No

66. a. I certify that I have no communicable or contagious disease.

b. *Circle appropriate statement*

I certify that I do / do not have a medical condition which will interfere with my taking regular Physical Education activity.

c. I certify that, to the best of my knowledge, the information on this form is complete and correct.

d. In case of illness and/or injury, permission is granted to treat the above-named student at the Health Service, San Jose State College, and to make the necessary referrals to outside physicians and facilities as indicated.

67. Date: _____ [SIGNED] _____
Student

Date: _____ [SIGNED] _____
If student is a minor, parent or guardian must also sign

MENTAL AND EMOTIONAL SCREENING

Appendix 2

SAN JOSE STATE COLLEGE
STUDENT HEALTH DEPARTMENT

Suggested Program for Improvement in Effective Living

1. The concept of Health has broadened, and has come to mean not simply the absence of incapacitating physical illness, but rather a positive and comprehensive ability to live adequately and effectively in all areas of existence, with maximum adjustability, enjoyment and happiness. The question and the challenge of the day is, "How can this Health and this Happiness be achieved?"

2. That mental and emotional attitudes can produce illness, disability and unhappiness has been established beyond doubt. What has not been so well realized, and is just beginning to emerge, is the concept that mental and emotional attitudes can, by the same token, be mobilized to produce health, well-being and happiness. This concept is essentially an *educative* concept, properly included in the newer Learning-Maturity school of thought. This school says, in effect, that anyone with the ability to understand the printed or spoken word, the ability to learn, and the desire for self-improvement, *can* improve the effectiveness of his living in these areas—short, of course, of severe mental disorder.

3. This area of general education has been largely neglected, and this fact puts the cards on the table—such a program necessarily becomes a *self*-educative process. It's up to you, and the paramount consideration is simply the intensity of your desire to improve yourself.

4. This is not an easy procedure. One of the primary difficulties is the fact that people are, in great part, creatures of habit and conviction. Much of our inadequacy in these spheres of living is based simply upon previous habituation to faulty responses, much of which has been beyond our control. In this respect we can be likened to "juke boxes"—the records are already in the machine, and when we are faced with a given situation, the automatic selector places the record on the turn-table, and before we know it, the needle is in the groove. The only hope we have

is to clean out the old records, exchange some new ones for them, and add more as time goes on. Fortunately, this is within our power, *if we will do it*, and fortunately, our machines have capacities for new additions as yet unmeasured.

5. The situation is further complicated by the perverse pleasure people seem to derive from making faulty responses—for instance, the syrupy pleasure derived from self-pity, or from wallowing in maudlin melancholia, or the luxury of "blowing one's top." We generally know (at least in retrospect) how we should act, and think, and feel, but somehow we just cannot bring ourselves to do the right thing.

6. Considering these difficulties (and they are not to be underestimated), the only alternative seems to be a process of reconditioning. This means, simply, breaking old faulty habits, and establishing new, better ones in their place. This is easy to say but hard to do. It requires all the resources we are able to muster, all the tricks and means of the learning process, and, above all, *time*. The time necessary to break old habits and substitute new ones will at least equal the time invested in the old ones to begin with—namely, your age in years. More likely, it will be a lifetime proposition. The effort necessary may be prodigious. The rewards, however, in happiness, success and effective living are rich, as attested by many truly happy and successful people. The earlier you get started the easier it will be, the quicker it will be, and the more you will achieve.

7. It should be pointed out that this approach is not new; it is probably as old as recorded history itself, but it has never been incorporated as an organized technique in our rearing, or our education. Ben Franklin used the method, attributed most of his success and happiness to it. Coué was close, in the twenties, with his method of "Auto-suggestion"—("Every day in every way I am getting better and better".) In fact, one of the most significant "break-thru's" recently emerging in this field, probably arises from this preliminary work of Coué. This is the new book, *Auto-conditioning*,[6] by Hornell Hart, PhD., out of Duke University, with an impressive background of some twenty years of research stemming from Columbia, Chicago University and Duke.

Other outstanding works in this field are:

How to Live 365 Days a Year, by John Schindler, M.D.[7]

Conditioned Reflex Therapy, by A. Salter.[8]

How to Stop Worrying and Start Living, by Dale Carnegie.[9]

[6] Englewood Cliffs, N.J.: Prentice-Hall, 1956.

[7] New York: Prentice-Hall, 1954.

[8] New York: Creative Age Press, 1949.

[9] New York: Simon and Schuster, 1948; also Cardinal ed., New York: Pocket Books, 1953.

8. The field is still wide open. Any program must necessarily be individualized, and the following suggested procedure is intended as a guide only.

a. The first obvious step is enlightenment and orientation. The suggested book is Carnegie's, *How to Stop Worrying and Start Living*. This book has perhaps the widest general application, and is available in the economical pocket-book edition for 35 cents. Read it through to get the total grasp first.

b. The next step is honest self-appraisal in light of the general enlightenment provided by your preliminary reading. This should be carried to the point of crystallizing your desire to change or improve into firm and determined resolve.

c. Set up your personal program as the equivalent of any of your college courses. Outline one chapter of the above book per week, *in detail*, with particular emphasis upon the elements that you feel apply especially to you.

d. Review all outlined material *daily* as it accumulates, with reference to your daily life and progress. It is this early intensity and frequency of repetition that is most vital to the success of your program. True, you know and get to know these things very well indeed, but that is not the point. You have to constantly break through your disinclination to acknowledge these things and they must be habituated. Let's face it, reading once through a book isn't going to change your life—otherwise we'd all be paragons of virtue and happiness.

e. In connection with the previous step, it is recommended that you list and tabulate your faults and/or needs, and keep actual daily score. You might pick one a week to concentrate on, after the method of Ben Franklin (refer to his Autobiography for details).

f. Make up your mind to continue this program regularly and continuously. The first year is the hardest, but also the most important. Eventually, as time goes on, your reference and self-evaluation periods will be more widely spaced, as your need for them decreases.

g. Follow through, after you are well started on your program, with wider reading on the subject. Bear in mind that progress in this field is just beginning. Cultivate in your reading an attitude of research, inventiveness, creative thinking. You may well want to incorporate other ideas and principles in your program, and you might come up with something new. There are many excellent books on the general subject; space permits the listing of only a few here:

Your Creative Power—by Alex Osborn (originator of "brainstorm-

ing", now widely used in industry, educational and governmental circles) [10]

How to Win Friends and Influence People—by Dale Carnegie [11]

The Wealth Within You—by Elmer Wheeler [12]

The Magic of Believing [13]

TNT The Power Within You—by Claude Bristol [14]

Again, remember that reading once through will do little for you.

9. This is what it takes. If you do this, unquestionable rewards will follow; if you don't, they won't. It's that simple. It's worth a try, but a "little" try is not enough—it takes a long, hard try, and often lots of courage. It's your life. What you do with it is largely UP TO YOU.

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[10] Alex Osborn, *Your Creative Power* (New York: Scribner's, 1949); *Applied Imagination*, (New York: Scribner's, 1953).

[11] New York: Simon and Schuster, 1936; Pocket Book ed., New York: 50th printing, 1954.

[12] New York: Prentice-Hall, 1955.

[13] Claude Bristol, *The Magic of Believing* (New York: Prentice-Hall, 1948); *The Magic of Believing for Young People*, adapted by Helen and Horace Johnson (Englewood Cliffs, N.J.: Prentice-Hall, 1957).

[14] New York: Prentice-Hall, 1954).

Book Review

Psychosocial Problems of College Men. Bryant M. Wedge, ed. New Haven: Yale University Press, 1958. 281 pages. $6.50.

This book is a significant contribution to the field of mental health in college because it reports how some major psychosocial problems have been isolated and studied systematically. The eleven contributors are all staff members of the Division of Student Mental Hygiene of the Department of University Health at Yale University, including the editor, who is the chief psychiatrist of the department, and four other psychiatrists, three psychologists, two psychiatric social workers, and one sociologist. The composition of the staff reflects the conviction that a multidisciplinary approach to college mental health can be a decided advantage to advance knowledge in this field.

From the multitude of possible problems the following have been selected: a theory of personality development for the period of seventeen to twenty-two years of age, the relevant factors for satisfaction with the college experience, the importance of personality for academic achievement, the academic "underachievers," the kinds of students who are leaving college because of emotional problems, personality as related to competitive ability, which students made use of the mental health facilities, group therapy as treatment, how to handle the "borderline" patient, fear of homosexuality, identity diffusion and the synthetic function, intellectual achievement and identification, and the treatment of idiosyncratic adaptation.

The theoretical orientation of the group is a psychoanalytically oriented modern ego psychology. Many of the contributors draw heavily upon the ideas of Anna Freud, Kris and Hartmann, Erikson, Nunberg, Rapaport, and Sanford. There is much emphasis upon the observation that college students are struggling to achieve

identity as persons. They certainly have been molded by family influence, but the going through college implies both a re-evaluation of this influence as well as a constructive adaptation to the pressures and expectations of the new social environment. Thus, this period of adolescence is an important formative phase of personality development, when sometimes professional help can be immensely valuable. Having worked with this age group, the contributors have reason to believe that personality is perhaps not fully developed as early as some theorists say.

The function of their theory for the reported studies is not quite clear to the reviewer. It does not seem to serve the function of generating operational hypotheses which can be systematically tested as some theories of personality do. One partial exception to this statement is Hart's chapter on "fear of homosexuality" which he says is positively correlated with the patient's general degree of ego integration. Prelinger, in a rather technical chapter, also develops hypotheses about the nature of the Rorschach responses for varying degrees of synthetic function of the ego and uses one case study to illustrate how plausible they are.

The major methodological tools in these studies are the clinical case study and the questionnaire. The reviewer gets the impression that these studies often originated from a staff member's feeling that a certain group of patients had one or more significant characteristics in common. Such an approach is often the beginning of a fruitful scientific program, since the purpose of science can be described as the search for "invariances" in subgroups of the population. At a more advanced stage experimental studies will be necessary in order further to test clinical hypotheses which have received a preliminary confirmation. Then control groups are essential as well as the testing of the subjects at various stages of treatment.

Some ideas and results from this study seem significant. Wedge points out that during the age period from seventeen to twenty-two years the main problem is bringing the ego in relation to social reality rather than primarily to learn to cope with the powerful instincts of the id. A systematic study addressed directly to test this observation would seem worth while. From the point of view of preventive mental health it seems crucial to increase the edu-

cators' and administrators' readiness to recognize and canalize the college students budding self-identity. This should not be overemphasized, however, since Davie rightly stresses the importance of peer relationships as one finding in his study. On the other hand, the students are longing for increased person-to-person contact with their professors.

Among the "underachievers" Neugeboren found adjustment reaction of adolescence, psychoneurosis, character disorders, and borderline psychosis. Harrison established that from a total of 179 students, 36 per cent left college because of character disorders, 32 per cent because of psychoneurosis, 29 per cent because of psychosis, and 2 per cent because of transient personality reaction. Of these students about half never returned, while 33 per cent returned and graduated, and 15 per cent returned and had to leave again. Of those who left again without graduating a follow-up study showed that almost 75 per cent had then no psychiatric disability. It is reassuring to notice that students who drop out of college for emotional reasons frequently undergo constructive personality change through intensive treatment.

Igersheimer gives a fascinating clinical description of the process of group therapy with students suffering from psychoneurosis and psychosomatic complaints. Even if no objective measures were used, one gets the impression that group therapy can be partially "successful" with psychosomatic cases who are often resistive to individual treatment.

Arnstein has treated borderline psychotics and found that eight out of fifteen improved. He observed ego weakness in them all, and therefore the major effort was to "strengthen the ego." In a basically "nondirective" atmosphere he avoided criticism, encouraged patient autonomy and a limited type of insight, and applied indirect reassurance. Hart emphasizes the importance of treating *fear* of homosexuality in college, which of course is much more frequent than manifest homosexuality. He asserts that this fear is positively correlated with the patient's general degree of ego integration.

Wedge shows that some students who are not necessarily neurotic show idiosyncratic adaptation to college. They appear disturbed upon entering without any history of maladjustment from previous

years. Wedge recommends the technique of "interpretation through surprise" with these students to facilitate the exploration of new adaptational modes. When the student sooner or later comments on some relevant idiosyncratic behavior on the part of some family member, the therapist shows his "surprise," and the patient, quite differently from the neurotic person, seizes upon this opportunity to realize the idiosyncracies.

LEIF J. BRAATEN, PH.D.

Cornell University

Gaps in Student Health Programming

Dale Tanner, Director, Student Department

CONTINENTAL CASUALTY COMPANY

THE PROBLEM . . .

State University justifiably was proud of their newly completed College Health Service. With a large competent staff and extensive services, it offered complete hospital facilities. They were equipped to handle almost every medical need which might arise. Surely their students shouldn't have to worry about the financial strain of an unexpected sickness or accident!

But then an element of doubt suddenly began to grow. First there was the carload of students on their way to an out-of-town football game who were involved in a serious automobile accident and hospitalized 120 miles away from campus. Then there was the flu epidemic that swept the state during the Christmas holidays. Then there were the countless individual cases involving students who became sick or injured while off campus during the week-ends, holidays, between semesters, etc.

Case by case, the off-campus sicknesses and accidents began to add up. As more and more incidents came to their attention, the administration became increasingly concerned. For no matter how good was their shining new hospital, the student was faced with the same old problem when unable to use these facilities! Contrary to the University's hopes, students were *still* faced with extreme hardship and all too many times sudden termination of their education due to big and unprepared-for Hospital-Medical bills because of an unexpected sickness or accident.

They took a closer look at just how important was this problem and made a startling discovery. While their students were paying a necessarily high health fee to support the student health service, the students had *no* health-care protection varying from 30% to 50% of the year.

This "time-away-from-campus gap" in the health care program is becoming evident to more and more colleges and universities. It is a big gap that must be filled (and is being filled by an ever increasing number of schools) if the student's educational welfare is to be properly considered.

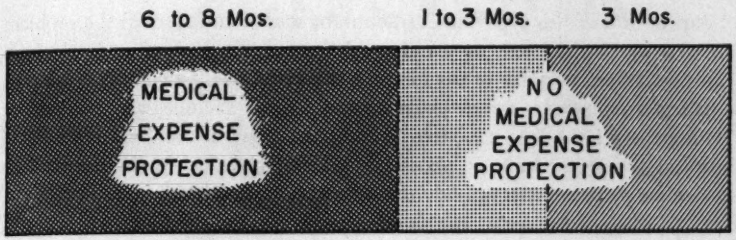

Figure 1. Time on and off campus.

However, most colleges have the above problem compounded by a more evident one. Few colleges and universities are financially able to offer their students complete hospital and medical facilities. Many of the smaller schools are unable to support a student health service *of any kind*. Within these extremes, health facilities vary considerably from school to school. Thus, many times a student's faith in his college health service is destroyed by its inability to care for his *immediate and basic health needs*, to say nothing of any castastrophic losses that he might sustain.

With more and more of the students marrying while in college, financial hardships are created when a dependent becomes seriously sick or injured. Yet, few of our colleges are equipped (or perhaps justifiably do not feel obliged) to offer medical care to student dependents.

Thus, the extent of health service facilities creates another gap varying immensely in magnitude from college to college.

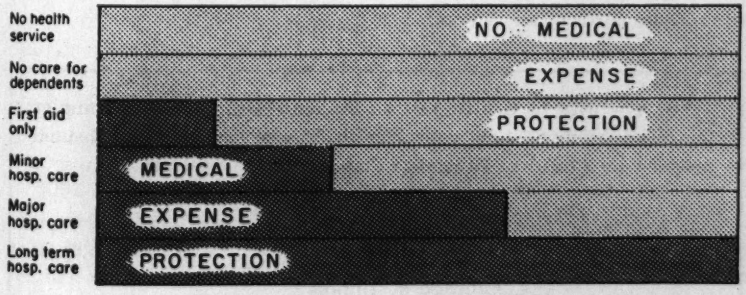

Figure 2. Extent of services provided.

THE SOLUTION . . .

Many colleges and universities are finding the solution to their student health problems through the installation of supplementary student health insurance programs. These programs can be designed so as to dove-tail exactly with the existing health services.

A program of this type can eliminate for school and student the problem created by the sickness or accident that occurs either at or away from campus. When hospital or doctor care is needed while away from campus, a college student's insurance program can provide the necessary protection. Where the school does not provide complete hospital facilities and outside hospital or doctor care is needed, while on campus, again the student insurance program can provide the necessary protection.

Dependents of married students may also be covered under the school's insurance plan if so desired.

Installation of a student health insurance program as a supplement to the health service can provide more complete protection for the students against either the short or long term disability from either sickness or accident. Not to be over-looked is the high public relations value of such a program through the increased confidence of both parents and students as to the completeness of the school's over-all health program.

The key to the success of such a program as herein described lies in the design of a sound, comprehensive program that meets the needs of the specific school. Moreover, and even more important as a guarantee of this success is the requirement that the underwriting company have a reputation for efficient installation and reputable claims handling! The Continental Casualty Company, as "America's No. I Accident and Sickness Insurance Company"® and the leading writer in the College-University Student Market, maintains just such an enviable reputation. Their large staff of Student Health Counselors, actuaries and other service personnel are available nation-wide to help design and install a program to meet the specific needs of any school.

For a reprint of this Report on Student Health Programming or for information on how your Health Service can be supplemented properly by a Student Insurance Plan, contact:

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Continental Casualty Co.
310 S. Michigan Ave.
Chicago 4, Illinois